

PRODUCT CATALOGUE
LED Light Fittings

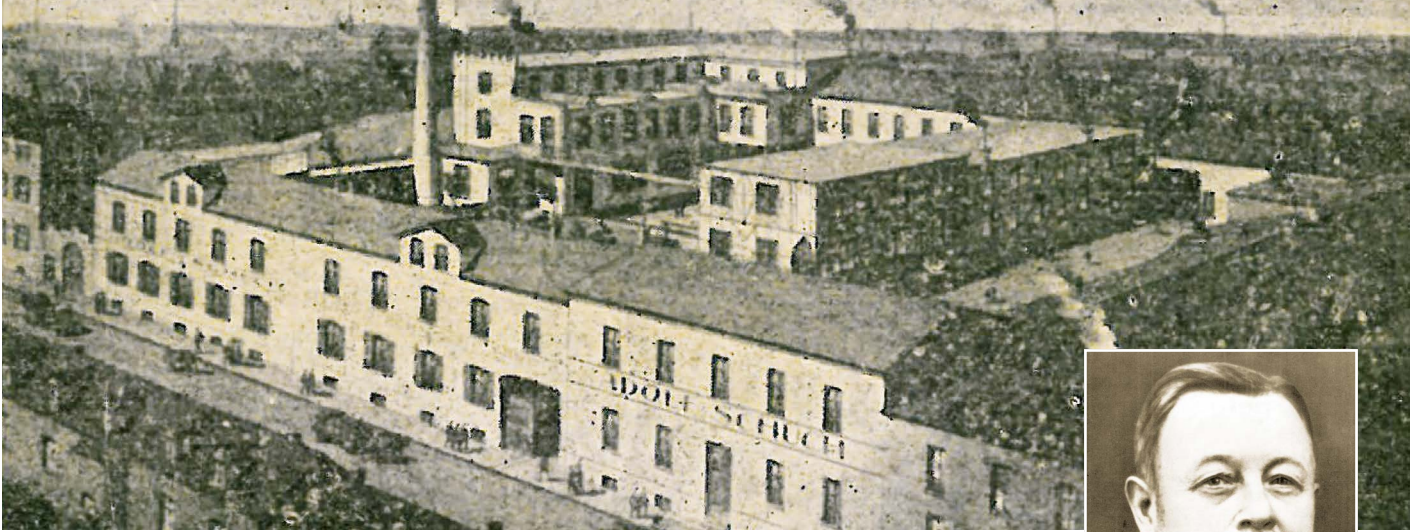
2024/25

Light Management
Explosion-Proof Light Fittings
Dust- and Waterproof Light Fittings
High Bay Light Fittings
Outdoor Light Fittings
Emergency Light Fittings



Table of Contents

SCHUCH - The Company	2-7
Chronicle	2-3
Quality, consistency, future-oriented	4-5
GreenLine - sustainable product design	6-7
Light Management Systems	8-25
... <i>Industrial indoor</i>	
LIMAS Air	8-11
LIMAS Line	12
LIMAS Line Basic	13
LIMAS Line Pro	14-15
LIMAS Line ESC	16
... <i>Outdoor areas</i>	
LIMAS	17-20
RFL light fittings	21-22
LIMAS Air for sports facilities	23-24
LED Explosion Protected Fittings Zone 1/21	26-47
Light fittings with diffusers	29-39
Sheet steel light fitting	40-41
High Bay light fitting	42-43
Floodlight	44-45
Ceiling- or Wall-mounting light fitting	46
Handlamp	47
LED Explosion Protected Fittings Zone 2/22	48-67
Light fittings with diffusers	48-55
Sheet steel light fittings	56-57
High Bay light fittings	58-59
Floodlights / Plane surface floodlights	60-63
Ex-Protected Installation Components	64-67
LED Dust-/Waterproof Light Fittings	68-125
Light fittings with diffusers	72-108
Oval shaped light fitting	109
Compact LED fittings	110-112
Tubular light fittings	113-116
Sheet steel light fittings	117-120
Vandal proof light fittings	121
Mounting rails / through wiring systems	122-124
LED High Bays	126-151
Smart lighting control LIMAS Air	128-129
2-point-mounting	130-138
1-point-mounting	139-149
Floodlight	150-151
LED Outdoor Light Fittings	152-263
Technical outdoor fittings	154-202
Decorative outdoor light fittings	203-236
Floodlights / Plane surface floodlights	237-250
Large-Area Spotlight	256-261
Pole arm carriers and pole-top brackets	262-263
LED Emergency Light Fittings	264-283
Technical Attachment	284-296
Summary of the products	298



SCHUCH — A COMPANY WITH TRADITIONS

CHRONICLE

2. March 1895

A few years after the invention of the incandescent lamp, Adolf Schuch founded the company Adolf Schuch Elektrotechnische Fabrik in Worms at the river Rhein.

He started the production of waterproof porcelain lamp holders for incandescent lamps, as well as waterproof porcelain hand lamps with protective glass for local breweries, tanneries and chemical plants.

1906

Production of first street light fittings.

1910

The first explosion-protected mining light fittings were delivered to coal mines in the Ruhr region, the Saarland and South Africa.

1929

Explosion-protected light fittings were the basis of the whole manufacturing program. SCHUCH became a pioneer for explosion-protected light fittings.

1940

Large parts of the factory buildings are destroyed by the war. Continuation of production in alternative building.

21. February 1945

Destruction of all company premises and alternative buildings as a result of intense bombing of Worms.

1945 -1948

Recovery of production.

Launch of an improvised manufacturing program for night lamps, desk lamps, workplace and shop lamps, due to deficiency in raw materials.

1948

The production of explosion-protected light fittings, street light fittings and industrial and special-purpose light fittings of all types was restarted.

1949

Production of first light fittings for fluorescent tubes, as well as street light fittings for high pressure mercury lamps.

1952/1953

Fiberglass-reinforced polyester was used for the first time to produce housings for moisture-proof, explosion-protected and street light fittings.

Introduction of own production of so-called

“PREPREG” (preimpregnated fibres), as well as construction of an in-house moulding pressroom to produce fiberglass-reinforced polyester housings.

1953

First approval to use explosion-protected linear light fittings for single-pin fluorescent tubes

1957

As a result of the expansion of production demand, the company enlarged its working and storage areas by more than 14,000 m².

1962

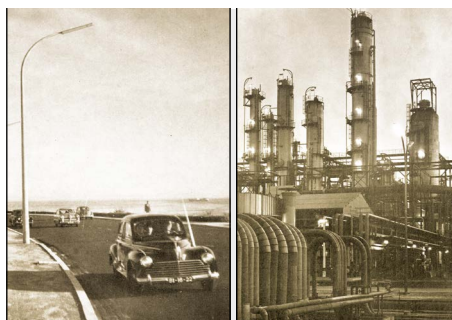
The new plant II on the outskirts of worms got erected.

1964

The production was mostly moved into a new modern plant in the Mainzer Strasse in Worms, which included GRP pressing, mechanical workshops and a fully automatic powder-coating line.

1969

New plant expansion to the total of 40,000 m². SCHUCH achieved a deep vertical integra-





tion and extensive technologies for design and production of highly-protected technical light fittings.

1972

Start of production of the legendary 161/162 series waterproof light fittings. A major milestone in the company's history.

1975

A foamed polyurethane gasket was used in waterproof light fittings for the first time. The semi-automatic foaming systems required for this are manufactured in our own toolmaking shop.

1988/ 1989

World's first approval to use an explosion-protected linear light fitting for a 2-pin fluorescent tube. SCHUCH became a pioneer for modern explosion-protected linear light fittings.

1995

Company's 100th Anniversary
First time certification of quality management system according to the new standard DIN ISO 9001.

1998

First approval worldwide of an ex-ECG with „end-of-life“ shutdown. Immediately afterwards, this will be included in the standard.



After 2000

The start of extending the standard manufacturing program, as well as special industry solutions for various application conditions in the industry.

2002

LED technology is revolutionizing lighting. From 2002, SCHUCH concentrated its development activities in all product areas on energy-efficient LED solutions.

2005 - 2009

An almost complete range of LED lights is created within a few years and successfully launched to the market.

2011

The LED range is complete with the introduction of the first ex-protected LED lights.

2014 - 2019

A phase of extensive investments begins, in which production capacities will be expanded in many areas by 2019, new production technologies will be introduced and energy-efficient renovations will be carried out according to the most modern, environmentally friendly aspects.

2016/2019

Lighting becomes smart: introduction of the LIMAS light management



system and so-called RFL lights, which are suitable for easy retrofitting of a light management system.

2019

SCHUCH deals intensively with the influence of so-called harmful gases on LED lights. The RESISTANT luminaire range develops from this.

2020

125 years of SCHUCH
Competent, innovative and with passion for excellent lighting!

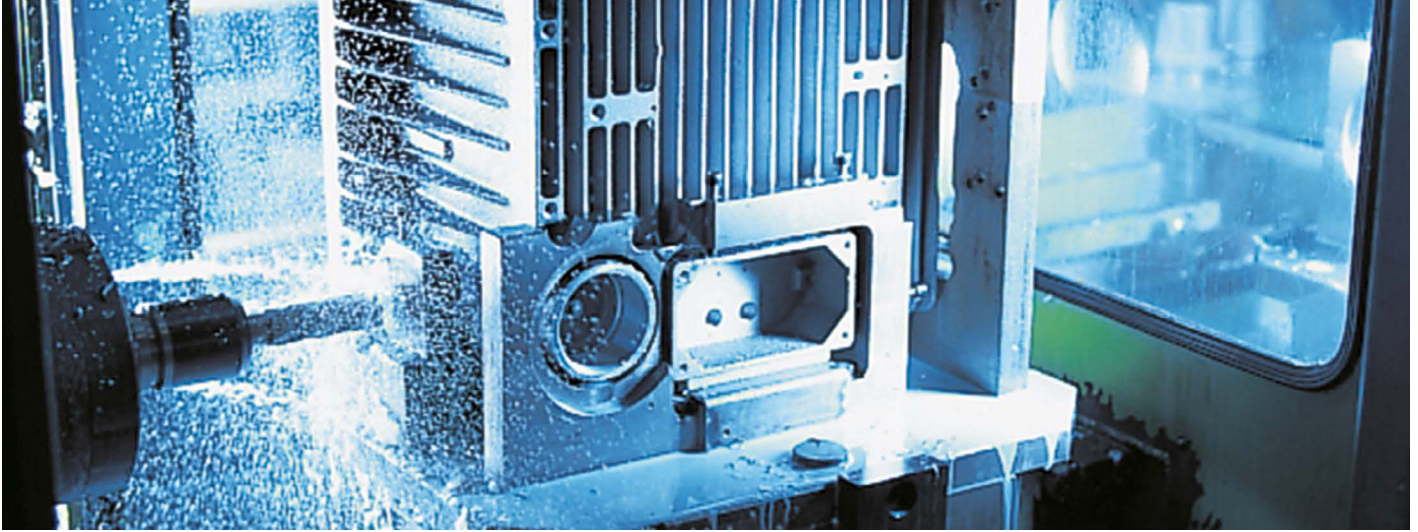
2021/22

On our way to becoming a climate-neutral company, we are reaching the next milestone with the installation of our new photovoltaic system with an electricity production of 350,000 kWh p. a. and the planned expansion up to top approx. 900,000 kWh p. a..

2023

With the cross-series GreenLine product line, we place the sustainable design of our products at the centre of our activities. The GreenLine label identifies outstandingly sustainable luminaires in our product range that meet all the criteria of a sustainability catalogue.





SCHUCH: Quality, Consistency, Future-oriented

EVERYTHING FROM A SINGLE SOURCE

From design to final assembly: the company located in Worms performs all the light fitting design, testing and production stages.

SCHUCH engineers use advanced CAD systems to design new light fittings as well as special thermal simulation programs in order to reach optimal temperature control for each LED light fitting. This is a decisive factor for LED service life and, therefore, it is one of the most important quality parameters of a good LED light fitting.

Deep vertical integration in the light fitting production is typical for SCHUCH.

Die forming and cutting, bending and welding of metal parts and housings are performed using modern machining centers and welding robots in mechanical manufacturing.

A modern environment-friendly powder coating unit is used to paint metal light fittings with varnish of a standard or customized color.

Since 1955, all light fittings made of fiberglass-reinforced polyester are produced in a separate pressroom and then provided with polyurethane/silicone gaskets in a fully automated dispensing system.

The tools required for forming, bending and pressing are produced in the in-house tooling workshop.

Careful manual assembly of light fittings is performed in several assembly departments. Finally, each light fitting undergoes specific functional test.

The moulding of explosion-proof LED boards and the ultra sonic welding of gas-tight LED lights are the latest manufacturing processes used in the Worms plant, which further extends SCHUCH's know-how. Constant quality controls and internal audits at all production levels ensure the high quality standard of all SCHUCH lights.

Continuous quality control and internal audits at all production stages ensure a high quality standard for all SCHUCH light fittings.

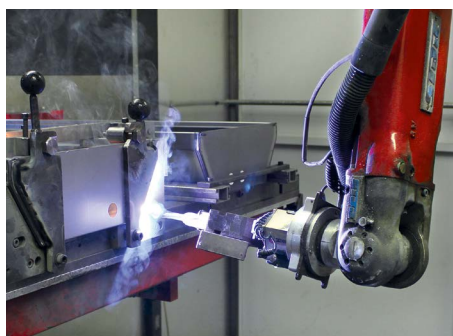
Light fittings, their components and materials are thoroughly tested in our own measuring laboratories, accredited by testing bodies.

Along with the lighting measurements, determination of luminous flux and representation in light distribution curves, light fittings are checked for emitted interferences and noise immunity in accordance with EMC Directive 2004/108 EC and the Electromagnetic Compatibility Act.

Dust- and water chambers are used to check IP rating of the light fittings, including sealing tests underwater.

Heat measurements to check the maximum admissible ambient temperature, low temperature tests and material ageing tests performed in climatic chambers, especially for explosion-protected light fittings, finish the Test Program for SCHUCH light fittings.

This comprehensive philosophy allows SCHUCH to control all processes and to react promptly and flexibly to changing requirements.



EXCELLENT QUALITY

SCHUCH light fittings are unique branded products "Made in Germany". The proverbial high quality standard which you can rely on.

This is proven by **Quality Certificate as per DIN EN ISO 9001**, which is continuously reconfirmed by VDE, reflects it.

Quality management covers all company activities, starting from design, engineering, production and final assembly to sale, and is valid for all product and manufacturing fields.

Being a manufacturer of explosion-protected light fittings and components, SCHUCH, moreover, is subject to an even stronger supervision by PTB with regard to **quality control as per DIN EN ISO/IEC 80079-34**. The routine surveillance audit has been successfully carried out and reconfirmed by a corresponding certificate since 1999.

The highest quality standards from SCHUCH are also confirmed by the railway. **Since November 7th, 2019, SCHUCH has been a certified Q1 quality supplier to the railway company Deutsche Bahn AG.**

100% ORIGINAL SCHUCH

Every single light fitting of our product range is an original SCHUCH product. Designed and engineered by our own engineers, produced using own tools and 100% quality approved in our own work shop. Unique and with it distinctive.



 **MADE IN GERMANY**

ON THE WAY TO A CLIMATE-NEUTRAL COMPANY



As a manufacturing company, SCHUCH takes its environmental responsibility very seriously. Oriented towards long-term goals, our actions are consistently aligned with the **principle of sustainability**. Through responsible use of limited natural resources and the development of sustainable products, we make an active contribution to environmental protection for a future worth living for present and future generations.

Our luminaires are **not disposable products**. They are designed for high energy efficiency and long service life. The resulting energy savings and very long service lives help to conserve resources and reduce waste. All built-in components can be replaced by skilled personnel if necessary. The only exception is the PRIMO XR series, which must be hermetically sealed due to the application.

All SCHUCH products comply with the requirements of the **REACH** and **ROHS directives**. SCHUCH is a member of the recycling systems **Interzero®** and **Grüner Punkt** - Duales System Deutschland (DSD) for the proper disposal of packaging and the return and recycling of old equipment.

With permanent measures to **reduce our CO₂ emissions**, we have been on the way to becoming a climate-neutral company for years.

The most important **milestones** in recent years were:

- The energetic renovation of our main building
- The conversion of our entire factory lighting to LED with corresponding lighting control concepts
- The investment in a new powder coating plant designed according to the most modern environmentally friendly aspects.
- The installation of a photovoltaic system for our own power supply on the shed roofs of our production hall.
- The start of the conversion of our company vehicles to electric cars
- The establishment of a charging infrastructure at the Worms site

The consistent **focus on the development and production site in Worms** also minimises transport distances. In addition, the high degree of vertical integration ensures that preliminary products are often manufactured directly on site and do not have to be delivered over long distances. In addition, our facilities and production processes are intensively examined in **regular energy audits** for further energy-saving potential. Continuous internal process optimisations contribute to the optimal use of resources and the reduction of resource consumption.

As a responsible family business with a history of over 125 years, we are making our contribution to climate protection, reducing environmental pollution, lowering CO₂ emissions and conserving valuable resources.

Print products are produced in a **climate neutral** way. The respective CO₂ content of the print job is determined and saved elsewhere through the financial support of aid projects all over the world. To this end, SCHUCH works together with various printing companies and renowned climatepartners.

Specifically, SCHUCH is using this catalogue to support a Gold Standard verified project that promotes the expansion of renewable energy in Asia.



Print product with financial
climate contribution

ClimatePartner.com/11798-2312-1001





GreenLine – Sustainable product design in focus

In general, the following can certainly be said: the higher the quality of a luminaire, the more sustainable it is. In detail, however, a multitude of criteria determine the degree of sustainability of a luminaire.

The **Codesign for Sustainable Product Regulation (ESPR)**, which is expected in the future as part of the EU's „Green Deal“, puts these sustainability aspects into concrete terms.

Green Deal

The European Union has set itself the goal of zero net greenhouse gas emissions by 2050. Europe is thus to become the first climate-neutral continent. To achieve this ambitious goal, comprehensive measures are planned in the areas of financial market regulation, transport, energy supply, industry, trade, agriculture and forestry. Existing legislation is to be adapted to the EU's climate goals.

Codesign Regulation

The Codesign Regulation 2019/2020 (EU) sets, among other things, energy efficiency requirements for lighting products. The aim is to increase the efficiency of energy-related products, strengthen the circular economy and recycling and thus make a significant contribution to increasing sustainability and reducing greenhouse gas emissions.

Taxonomie Regulation

The EU Commission's Taxonomy Regulation sets binding standards for sustainable business. This is intended to guide investment in sustainable companies and technologies and thus support the Green Deal. The EU Taxonomy establishes comparable and reliable sustainability indicators across sectors.

With the new, cross-series **GreenLine** product line, we are meeting this special challenge!

GreenLine stands for outstandingly sustainable products in our range. For the classification of the luminaires, 12 (for outdoor luminaires 13) verifiable and objectively measurable sustainability criteria are used, which are based on the expected future European codesign requirements for sustainable products and additionally take into account the **Taxonomy Regulation**, which is intended to promote six sustainability goals defined by the EU as central.

This is illustrated by the following criteria 1 to 9, which anticipate future requirements that will only have to be met in a few years' time and are already being implemented today. In addition to these nine basic requirements, criteria 10 to 13 define requirements for environmentally friendly packaging, service life, energy efficiency and light emissions. These are supplementary voluntary requirements that must be met by all GreenLine products. All criteria are regularly reviewed and adjusted if necessary.

Basic requirements:

1. recycled material content $\geq 50\%$
2. modular design
3. use of standardised Zhaga-compliant LED modules
4. interchangeability of ECG and LED modules
5. decomposability at end of life
6. recyclability $\geq 80\%$
7. upgradeability
8. product guarantee at least 5 years
9. spare parts availability at least 10 years

Additional requirements:

10. 100% recycled paper packaging
11. long service life
 - ⇒ Outdoor luminaires L90 > 100.000 h
 - Indoor luminaires L80 > 100.000 h
12. high system efficiency
 - ⇒ Outdoor luminaires > 130 lm/W
 - Indoor luminaires > 150 lm/W
13. ULOR = 0 for outdoor luminaires

SCHUCH LIGHT FITTINGS: COMMITTED TO THE ENVIRONMENT



Sustainable use of materials

Only the use of material from secondary raw materials leads to true circular economy. Components that represent a high proportion of materials in the luminaires are particularly important. GreenLine products have a recycle content of at least 50% in relation to the weight of the luminaire. For outdoor luminaires, recycle percentages of 70% and more are achievable.



Recyclability

GreenLine light fittings are very easy to dismantle into their individual parts thanks to their consistently modular design. This makes it easy to separate the different materials for recycling at the end of the luminaire's service life. The parts are highly recyclable, resulting in a rate of over 80%. The GreenLine products thus make a significant contribution to the conservation of valuable resources.



Repairability & easy replacement of components

GreenLine luminaires are not disposable products, but always repairable. All components are easily replaceable, often even completely without tools. This saves expensive working time during maintenance, reduces possible disruptions to production or traffic to an absolute minimum and is an invaluable time and cost advantage.



Maintenance-friendly

When developing our products, we pay special attention to ease of maintenance and installation. Ideally, control gear and LED modules as well as other components can be replaced without tools. Maintenance-friendly luminaires are cost-efficient and save resources. The simple exchangeability of sub-components also ensures a long useful life of the light fittings.



Upgradeability, retrofittability & expandability with smart functions

The modular design of the luminaires means that many things are possible with GreenLine products. For example, the use of Zhaga-compliant LED modules ensures the greatest possible flexibility in the use of efficiency upgrades and new LED generations. Standardised Zhaga bases in the RFL luminaires, on the other hand, enable the use of sensors for autonomous or smart control with the aid of a light management system. Here, type and time can be freely selected. This flexibility and wide availability provides future and investment security.



High energy efficiency

GreenLine products are highly efficient. To keep the luminaires at the highest efficiency level, we always use the latest LED generations. In combination with extremely effective optics, the optimal and efficient solution for the respective requirement is achieved, maximum energy is saved and the CO₂ impact on the environment is reduced to a minimum.



Long service life of the components & long duration of use of the luminaire

Thanks to the use of high-quality components from well-known brand manufacturers, GreenLine products have excellent service life values with L80>100,000 hours (for outdoor luminaires even L90>100,000 hours). With an average operating time of 4,200 hours per year for street luminaires, this corresponds to a period of almost 24 years. With 1-shift operation in the industrial sector, 34 years are achieved, with 2-shift operation at least 17 years and with round-the-clock operation still at least 11 years. However, the possible service life of a luminaire is considerably longer. To make use of this extremely long service life, all components are replaceable. This, and the low failure rate of electronic components, conserves resources, reduces waste and contributes significantly to the protection of our environment.



Long-term availability of replacement parts

The availability of spare parts for decades is standard at SCHUCH luminaires. Due to the high vertical range of manufacture, the renunciation of commercial goods (all SCHUCH luminaires are in-house developments) and the cooperation with renowned brand suppliers, the control of spare parts availability is largely in our hands. Even after a series has been discontinued, we guarantee the supply of spare parts for a period of at least 10 years.



Guarantee

The quality of our products and the satisfaction of our customers is our highest priority. We therefore grant a five-year guarantee on all catalogue products with a rated service life $\geq 50,000$ hours. This quality promise stands for the quality of our luminaires, is valid from the date of invoice and is valid without registration. Of course also for all GreenLine products.



ULOR = 0 & Dark Sky

Luminaires for outdoor use must be selected and positioned in such a way that disturbing light emissions into the environment are kept to a minimum or, if possible, avoided altogether. All GreenLine luminaires for outdoor use fulfil this requirement. This is made possible, among other things, by special optics with precisely defined light control, shielding, time and demand-dependent controls as well as special light colours that effectively limit adverse light immissions. Only outdoor luminaires that emit no light into the night sky (ULOR = 0) and thus meet the strict specifications of the International Dark Sky Association (IDA) are awarded the GreenLine label.



Light Management Systems for industrial areas



Radio-based Light Management System

In many areas of an industrial or commercial enterprise, there is considerable potential for saving energy. By using new technology, a lot can usually be achieved here - especially in lighting systems.

This is how intelligently controlled LED lighting performs to a noticeable reduction in costs and, in the sense of a sustainable corporate management, to a significant reduction in CO₂ emissions.

With the radio-based LIMAS Air light management system, you can now make your lighting system smart in no time at all, easily and without any additional installation work.

Main features

It is not uncommon for production processes to change, and as a result, lighting requirements as well. If industrial interior areas are used differently, the lighting systems must also be adapted to the new visual tasks. The LIMAS Air light management system offers a high degree of flexibility and enables quick adaptation to new requirements.

The lights equipped with LIMAS Air communicate via a radio-based mesh network. Mesh networks organize themselves decentrally and are „self-healing“ - should a luminaire/ component fail, the communication takes place automatically via a functioning „neighbor“. This mode of operation ensures a high level of reliability for the entire system.

By integrating various sensors, the lights can be controlled efficiently and according to requirements, which leads to significantly reduced operating times and thus also to considerable cost savings. In addition, the service life time of the luminaires is extended.

Advantages

- Modular
- Tailor-made and expandable
- Comfortable
- Flexible
- Easily controllable
- Reliable
- Future-proof
- Sustainable and cost-efficient
 - reduction of energy consumption and thus reduced CO₂ emissions

Functionality

SCHUCH high-bay light fittings in DIMD version can be interconnected by using the LIMAS Air radio module. The radio module can be connected quickly and easily to all DIMD high-bay light fittings by means of a FastConnect connection (Plug & Play). LIMAS Air is also available for our dust- and waterproof light fittings. In this case, no additional radio module is required. All components needed for an interconnected lighting environment are already included in the luminaire itself. This innovative integration offers the highest level of convenience and efficiency

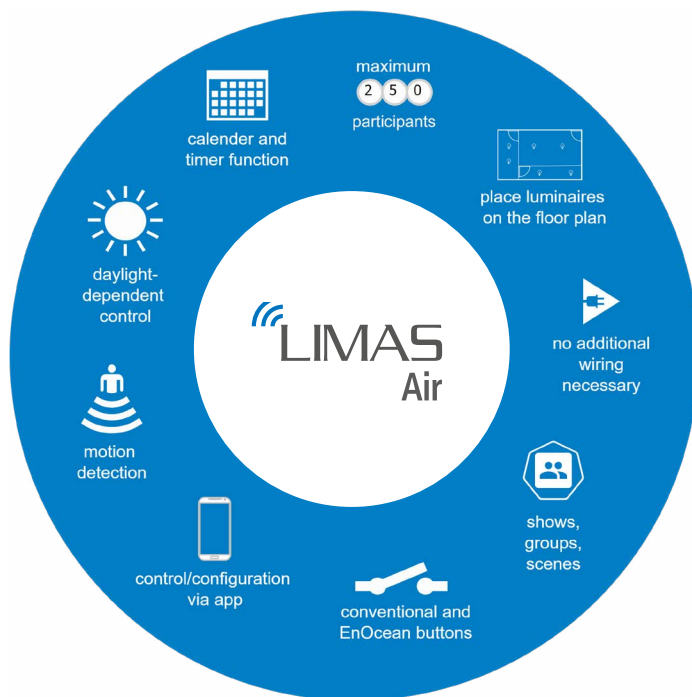


without compromising on quality. Networking through the LIMAS Air radio module or the integrated radio capability in our dust- and waterproof light fittings eliminates the need for additional wiring, saving not only effort but also valuable time and money. The lighting installation is thus made intelligent and flexible without the complexity of additional wiring. LIMAS Air opened the door to modern control options and created a smart environment for lighting requirements. Based on CASAMBI® radio technology and the Bluetooth radio standard, the lighting system can be reliably controlled with low power consumption and a long range. If DALI

light fittings with a CASAMBI® radio module are already part of an existing system, they can also be integrated. Using the free CASAMBI® app, the system is set up simply and intuitively via smartphone or tablet. Various sensors (e.g. motion- or daylight-dependent) and actuators (e.g. push-buttons) specially developed for the industry can be integrated accordingly and grouped flexibly. - An overall comfortable and user-friendly control system.



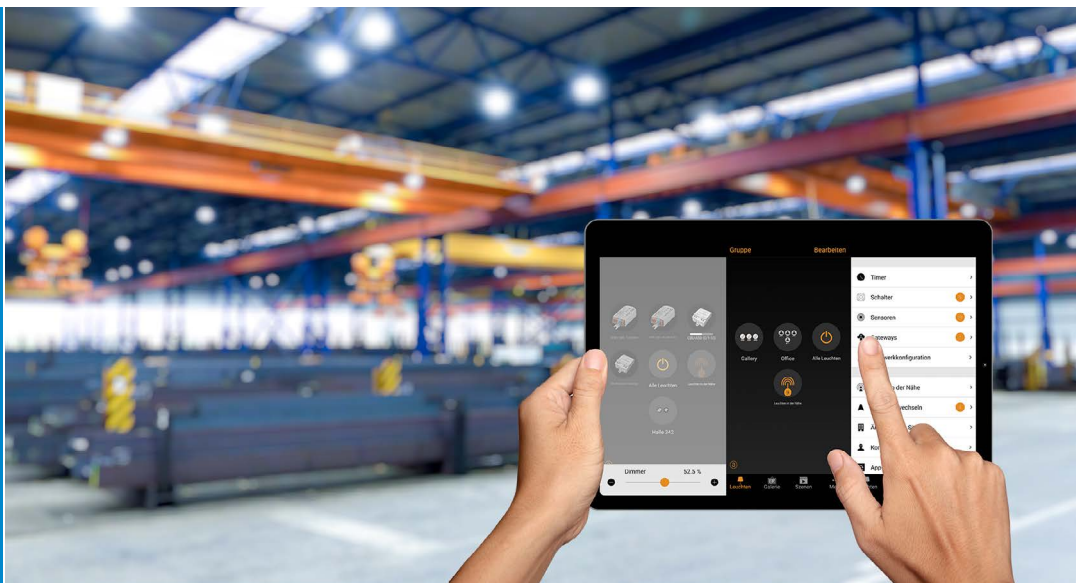
Features



- Up to 250 participants (luminaires, pushbuttons and sensors) in one mesh network
- Various scenarios programmable → easy and quick regrouping if requirements change
- Daylight-dependent control
- Control via motion detection
- Animations can be implemented (sequence of scenes or transition between scenes)
- Calendar and timer function
- Integration of battery- and wireless EnOcean pushbuttons
- Integration of conventional pushbuttons
- User-friendly user interface with floor plan display and location display of luminaires and components
- Readout of luminaire data (energy consumption, device version, dimming curve, etc.)
- Monitoring of the system with automatic failure notification
- Optional solution with gateway for central control and monitoring of the lighting system
- LIMAS Air lighting installation can be combined and controlled with wired DALI luminaires using the LIMAS Line PRO system

Areas of application

- Industry
- Parking garages
- Commercial enterprises
- Production halls
- Warehouses & logistics

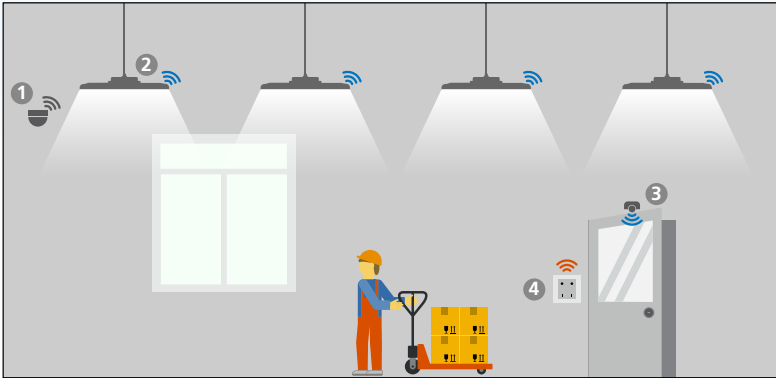


Schematic representations of possible energy savings potential

For an optimal lighting level and associated maximum energy savings, the motion detector and daylight sensor should always be combined. By a pushbutton the lighting can be manually overridden/ switched at any time.

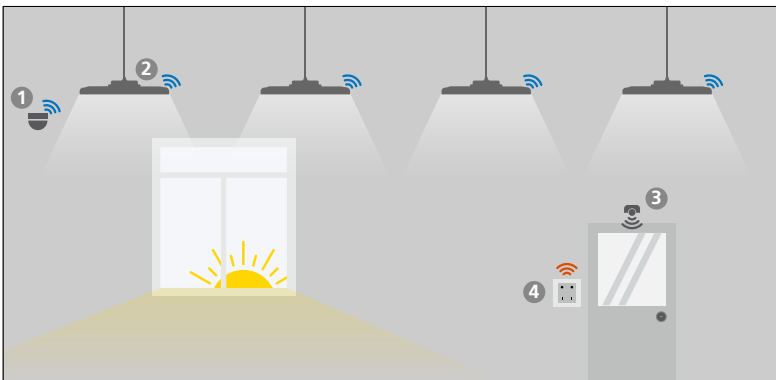
- 1 Daylight sensor
- 2 Luminaire with LIMAS Air radio module
- 3 Motion detector
- 4 Pushbutton

Presence detection

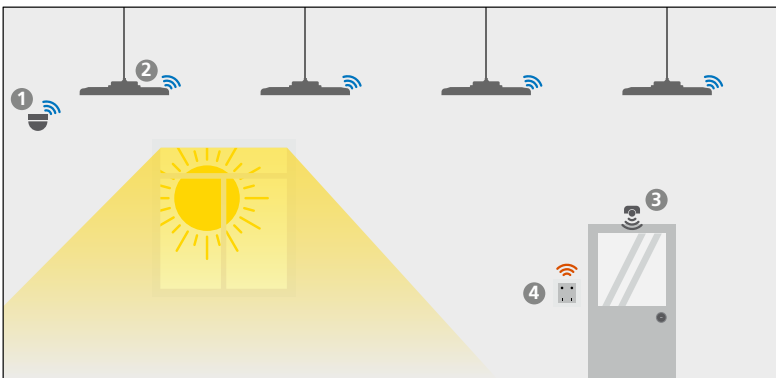


The motion detector ensures that the lighting is only switched on when people or objects with a temperature difference to the surroundings are present. In case of absence, the lighting is either completely switched off or dimmed to a preset level (such as 10%).

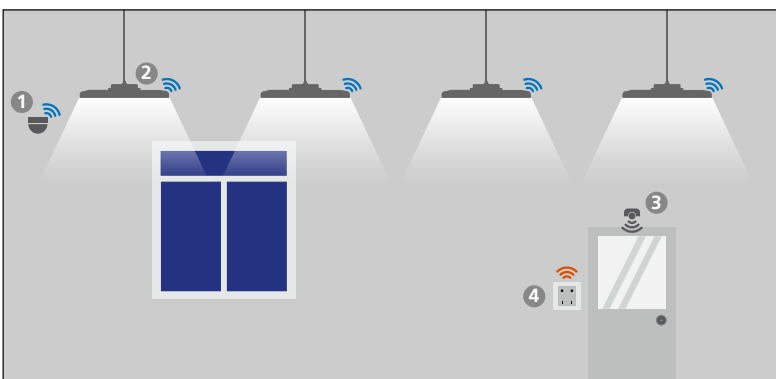
Daylight control



Depending on the amount of daylight, the light sensor dims the lighting to the desired level.



When there is sufficient daylight the sensor switches the lighting completely off.



At night, when no daylight is available, the lighting is set to 100% or to a different preset level.

Energy savings potential

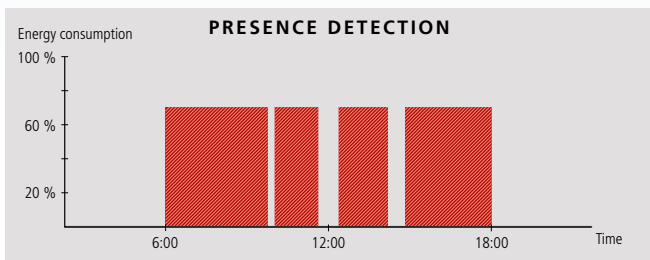
The smarter the lighting system, the greater the savings.

If luminaires are only switched on when they are needed, this has many advantages: energy costs are reduced, CO₂ emissions are lowered, resources are saved and the service life of the luminaires is extended. The more concretely the duration and the intensity of need for artificial light are defined, the better the efficiency potential of LED lighting can be exploited.



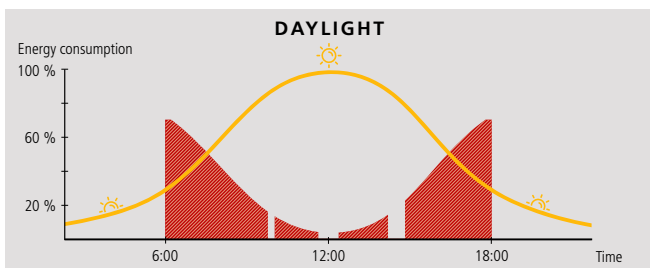
The light fittings are switched on continuously in the production hall during the entire operating time.

➔ **Minor savings, as the luminaires are only switched off outside working hours.**



Motion detectors capture the presence of people in the production facility. During breaks or when no movement is detected, the lighting remains switched off.

➔ **Increased savings as the light system is controlled according to demand during working hours.**



Daylight sensors measure the brightness in the production hall. This varies due to incident sunlight during the course of the day. The entire lighting system is continuously adapted to this and dimmed accordingly.

➔ **Optimum savings, as each luminaire only provides as much artificial light as necessary.**

Control components

LIMAS Air FM	90547 9001	CASAMBI® radio module with FastConnect quick-connector for controlling DIMD luminaires
LIMAS Air FM MK	90547 9002	CASAMBI® radio module with FastConnect quick-connector and 1m cable

System components

Type	Art.-No.		Figure
LIMAS Air BM/DS IR LPH max. 14m	90547 9005	Motion and light sensor for a mounting height of max. 14m and a detection area of up to 28m diameter.	1
LIMAS Air BM/DS IR LPH max. 12m	90547 9006	Motion and light sensor for a mounting height of max. 12m and a detection area of max. 3m x 15m.	
LIMAS Air BM/DS IR LPH max. 20m	90547 9007	Motion and light sensor for a mounting height of max. 20m and a detection area of max. 5m diameter.	
LIMAS Air BM/DS IR LPH max. 2,2m	90547 9008	Motion and light sensor for a mounting height of max. 2.2m and a detection area of max. 5m diameter.	2
LIMAS Air TAST INTER UP max. 4 KONT	90547 9009	Push-button interface for connecting up to 4 analogue push-button contacts. Intended for mounting in a flush-mounted box.	3
LIMAS Air DALI PS/C	90547 9010	Radio module with DALI power supply and broadcast control of up to 60 ECGs (total current 120mA). Power supply 230V.	4
LIMAS Air TAST UP max. 4 KONT	90547 9011	Battery-free 4-fold „EnOcean“ wireless pushbutton. When the button is pressed, energy is generated to supply the button electronics.	5
RFL LIMAS Air HUB TRI	90546 9013	Light management controller (2.4 GHz mesh network) with radio antenna and RFL base.	6





LIMAS Line

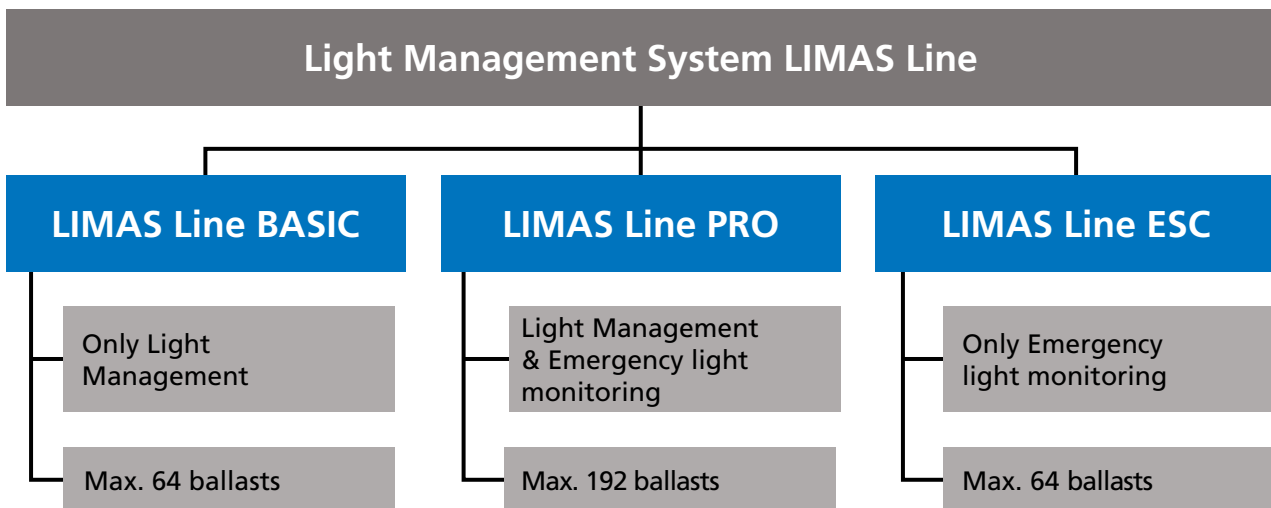
Wired DALI - Light Management Systems

Diverse activities in a room, different frequentation of areas and zones as well as day and season changing lighting conditions hold a high energy and CO₂ saving potential in lighting. Individually adapted light through intelli-

gent lighting control is not only of great advantage from an economic and ecological point of view, it also focuses on the different needs of people.

LIMAS - Line is available in three different versions:

- **BASIC - standard version**
- **PRO - extended version**
- **ESC - for central monitoring of self-contained emergency lights**



LIMAS Line BASIC

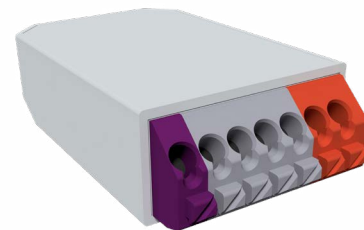
The standard version with all basic functions



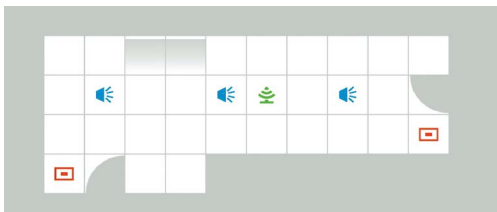
LIMAS Line BASIC

enables fully automated, dynamic light and thus offers a high degree of individuality.

The sensors register every deviation from the predefined values and report them to the controller, which reacts immediately. If, for example, the incidence of daylight changes, the lux value of the artificial light is adjusted accordingly. Switching on / off in the event of presence or absence is fully automated too. It is also possible to link the light settings of different zones and rooms with one another. The user himself does not notice the lively communication between the sensors and the controller. Everything that he perceives is needs-based, always optimally adjusted illuminance, which is activated at all times where and when he needs it.



User interface in the app:
exemplary floor plan design



The LIMAS Line BASIC light management system is configured via Bluetooth using a smart device (Android or iOS). All this requires is a free app. If this is installed, the room to be illuminated can be recreated in the form of a rudimentary floor plan and then equipped and configured accordingly with lights, sensors and buttons.

All DIMD-Light Fittings from the SCHUCH portfolio can be controlled by LIMAS Line BASIC.

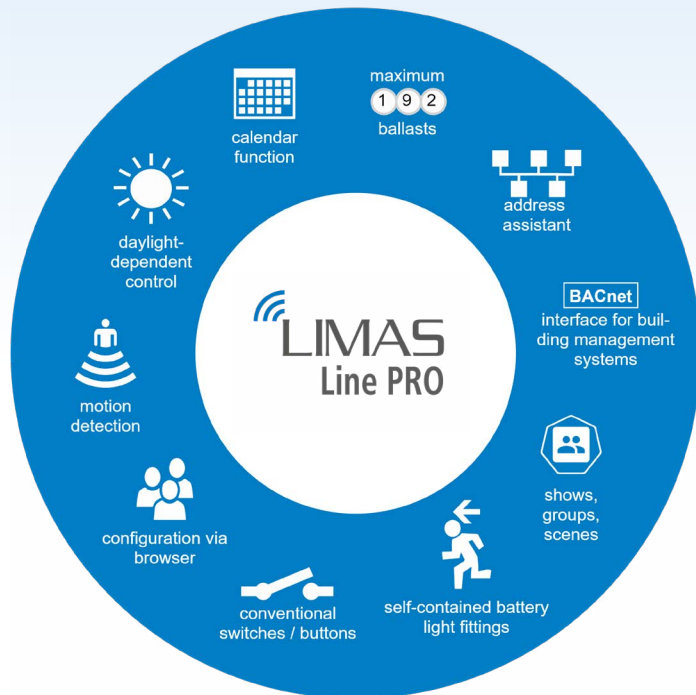
Features and advantages

- 64 ballasts (max.) can be controlled and monitored per system
- Daylight-dependent control
- Motion detection
- Configuration via smart device (smartphone / tablet)
- Easy integration of new light fittings
- Flexibility by simply changing dimming profiles and group assignments
- Conventional buttons can be integrated
- Integration of IP 66 sensors
- DALI2 sensors & actuators from third-party suppliers can be integrated



LIMAS Line PRO

The extended version that simply has more to offer



LIMAS Line PRO

allows easy addressing and grouping of luminaires, the integration of standard pushbutton switches and sensor-based automation.

In addition to DALI (DIMD) light fittings, this system can also be used to control and monitor all self-contained emergency light fittings (MA-Z, DIMDI and DI) in the SCHUCH portfolio. The configuration and control is done by PC without additional software - a browser is sufficient. The connection between a PC and LIMAS Line PRO can either be via an existing network or by establishing a peer-to-peer connection. There is no internet connection required to operate the system.

All DIMD, MA-Z, DIMDI and DI-Light Fittings from the SCHUCH portfolio can be controlled by LIMAS Line PRO.

Regulation according to needs

LIMAS Line PRO offers the possibility to integrate sensors. In addition to the presence-dependent control by temperature differences (PIR sensor), daylight-dependent control of the lighting can also be taken into account. Thanks to different detection areas, this is also the right solution for industrial halls.

Automation through calendar function

With the calendar function, day and time-specific lighting settings (scenes) are possible. This can include both: one-off events and annually recurring days (e.g. public holidays) can be saved.

Features and advantages

- 192 ballasts (max.) can be controlled & monitored per system
- Daylight-dependent control
- Motion detection
- Control / configuration via PC (LAN connection)
- Emergency light monitoring
- User-friendly operating interface for the consumer
- Intuitive installation by the assembly personnel
- Easy integration of new light fittings into the system
- Calendar function for the configuration of daily / time-specific lighting settings (scenes)
- Flexibility by simply changing dimming profiles & group assignments
- No DALI power supply system required
- DALI2 sensors & actuators from third-party providers can be integrated
- IP66 sensors
- Conventional switches / buttons can be integrated
- Integration of the light management system in a higher-level building management system (BACnet protocol)
- Up to 5 Controllers (max. 960 light fittings) can be combined to form a system network

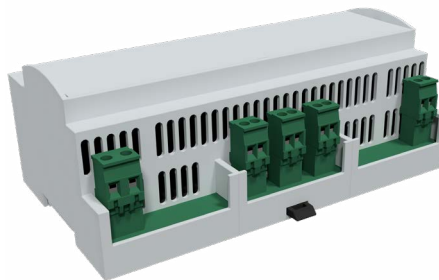
Individual control

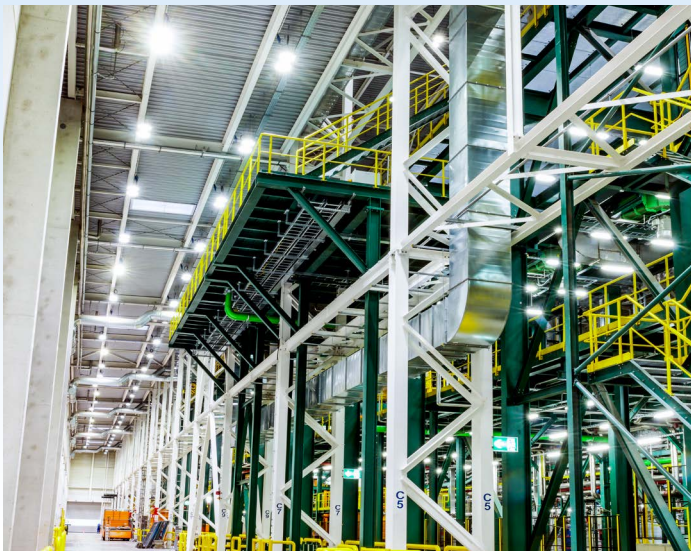
A converter is required to connect conventional switches or buttons. A maximum of four switches / buttons can be connected to each converter. The compact design of the converter allows it to be easily placed in surface and flush-mounted boxes.

Monitoring of self-contained emergency light fittings

When integrating self-contained emergency luminaires, function and duration tests can be carried out at any time and thus a central monitoring can be realized (look at DIN VDE V 0108-100-1).

The results of the emergency lighting tests are documented centrally and can be exported.





High Bay light fitting control by using the calendar function - In addition to full days, time-specific settings can also be selected. If, for example, all lighting is to be switched to 100% only during working hours

Integration of emergency luminaires with self-contained batteries - Emergency luminaires can be used with the following three types of circuit: Continuous light, standby light and controlled light.

Control components

Type	Art.-No.		Figure
LIMAS Line BASIC SCS	90545 0005	DALI2 controller for controlling up to 64 devices.	1
LIMAS Line PRO SCE	90545 0031	DALI2 controller for controlling up to 192 devices. Monitoring of single battery emergency lights possible.	2
LIMAS Line ESC	90545 0042	7-inch touch panel/controller to monitor up to 64 single-battery emergency lights.	3

System components

Type	Art.-No.		Figure
LIMAS Line IC	90545 0015	DALI-2 input controller with 4 independent inputs for connection of floating contacts/buttons.	4
LIMAS Line DALI PS 240mA	90545 0016	DALI bus power supply with max. 240mA.	5
LIMAS Line BM/DS PIR 2,5-2,8m R STE	90545 0035	Infrared DALI2 motion detector including light sensor for mounting heights of 2.5-4m.	
LIMAS Line BM/DS PIR 4,0-14,0m R STE	90545 0036	Infrared DALI2 motion detector including light sensor for heights up to 14m.	6
LIMAS Line BM/DS PIR 4,0-16,0m Q STE	90545 0037	Infrared DALI2 motion detector with light sensor for mounting heights up to 16m.	
LIMAS Line BM/DS PIR 1,8-2,5m RH STE	90545 0038	Infrared DALI2 motion detector with light sensor for vertical wall mounting for height up to 2.5m.	
LIMAS Line BM/DS PIR 2,5-5,0m Q STE	90545 0039	Infrared DALI2 motion detector with light sensor. For a mounting height of up to 5m and a maximum detection area of 6m x 23m.	
LIMAS Line BM/DS HF 2,0-4,0m R STE	90545 0040	HF DALI2 motion detector with light sensor for a mounting height of up to 4.8m and a maximum diameter of the detection area of 8m.	7
LIMAS Line MK4x10A	90545 0041	Four potential-free relays, switchable with DALI. Suitable for signaling test and system states of single battery emergency lights.	8
LIMAS Line ESC PS	90545 0043	24V power supply for the LIMAS Line ESC controller.	9



LIMAS Line ESC

Monitoring of self-contained emergency lights according to DIN VDE V 0108-100-1



LIMAS Line ESC

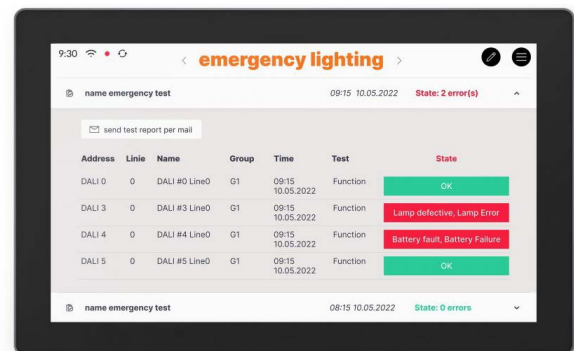
allows *DIN VDE V 0108-100-1* compliant, central monitoring of single-battery emergency lights.

- exclusively for monitoring single-battery emergency light fittings
- emergency light fittings can be switched with general lighting switches via L', special converters or DALI lines to the switch are not required

The panel automatically starts the function and operating duration tests and displays the system status and any error messages centrally. The time and frequency of the tests can be set individually with the help of the calendar function. When connected to the internet, error messages can be automatically forwarded to the user by e-mail. As the light fittings are provided with addresses and are named, an exact localisation of faults, and thus an optimal maintenance of the entire system, is possible. For documentation purposes, the test reports can be exported by e-mail. Operation and set-up is intuitive via the touchscreen display. An external PC is not necessary for control. LIMAS Line ESC allows monitoring of up to 64 single-battery emergency light fittings on one DALI line. The system can be expanded with up to three additional DALI lines. Two DALI addresses can be specified for fault signalling. This allows to transfer the error status to a higher-level system via relay modules. All MA-Z, DIMDI and DI single-battery emergency light fittings from the SCHUCH portfolio can be monitored with LIMAS Line ESC.

The LIMAS Line ESC system provides a user interface, that displays the current status and test results of the single-battery emergency lighting system. For convenient monitoring and functional testing, tests can be scheduled and automated. The test results are logged and, if desired, sent by e-mail. A 7 inch touch screen provides an easy operation of the system. With its customisable settings and technical specifications, it offers flexibility and reliability for use in different environments.

All MA-Z, DIMDI and DI self-contained emergency light fittings from the SCHUCH portfolio can be monitored with LIMAS Line ESC.



The most important differences to LIMAS Line PRO

- monitoring of up to 64 light fittings
- mounting on a flush-mounted box
- operation via the integrated touch screen panel, no PC required
- supply via 24V or Power Over Ethernet - POE



Light on Demand by intelligent lighting control

Light only where it is needed, only when it is essential, only as bright as necessary and only as long as it is required - with the help of a light management system, the efficiency potential of LED technology can be optimally exploited.

Intelligent, demand-controlled light saves a great deal of energy costs and is extremely environmentally friendly and sustainable thanks to the considerable reduction in CO₂ emissions associated with

it. In addition, the networking of the light points opens up a wide range of options for implementing smart city applications, provides an overview of the most important system parameters and enables proactive, targeted maintenance and troubleshooting. Therefore, both when renovating and installing new outdoor lighting systems, the question of the use of a light management system should always be discussed.

But when is the right time to use it?

Directly with the new installation or renovation of the conventional lighting has started, or should you wait a few more years? Perhaps the financial resources are lacking at the time of the renovation or you would like to start with a small test installation to gain experience. There is no clear answer to this question. But no matter how you decide, one thing is certain: once standard luminaires have been installed, simple retrofitting or conversion to a light management system is no longer possible.

Benefits

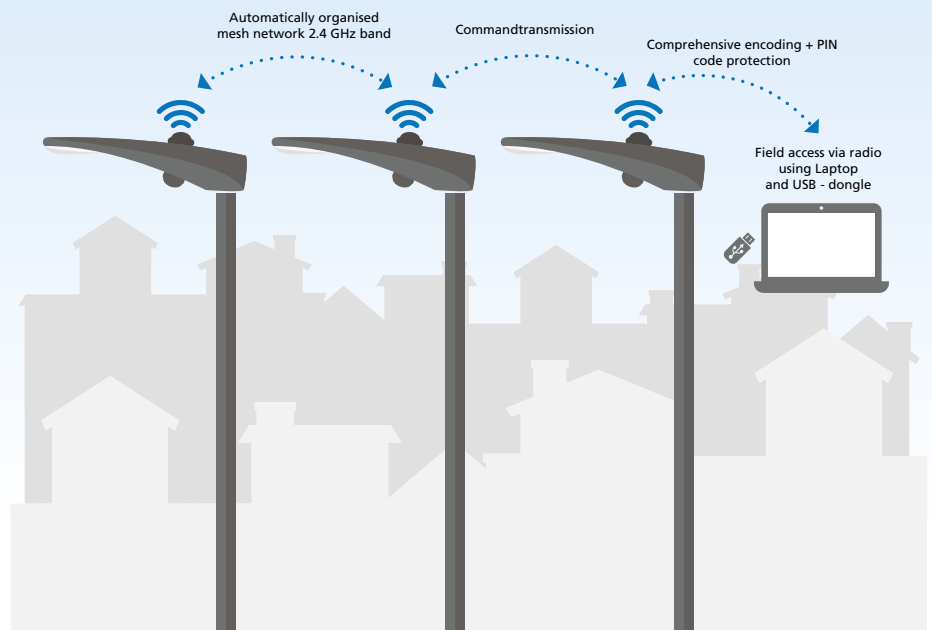
(D) = Solution with USB dongle (C) = Solution with Cloud Connection

- (D) + (C) Optimised energy savings through light on demand
- (D) + (C) Easy cost control through energy consumption metering
- (D) + (C) Evaluation and export of read or saved luminaire data
- (C) Proactive, targeted maintenance and failure elimination through the light fittings' automatic failure reporting and location display
- (D) + (C) User-friendly interface with graphic display of the light fittings' operating status, energy consumption, function and location
- (D) + (C) Flexibility thanks to straightforward wireless modification of dimming profiles, together with easy integration of new light fittings into the system with a self-organising mesh network
- (C) Time and date updates via time server for time dependent dimming
- (D) + (C) Central control and (with (C) automatic) monitoring of every single light point
- (D) + (C) No additional wiring required
- (C) Access to all system functions at any time and from anywhere in the world via the Internet

Version with USB dongle (standalone solution, no cloud connection)

With this system solution, the luminaires can be programmed and read out on site in the field using a USB dongle and Windows PC/tablet.

The luminaire parameters such as dimming level, run-on time and behaviour in the event of motion detection are stored in the radio controls/HUBs. The luminaires can be operated without a connection to the USB dongle. Both items also each contain a photocell for a twilight switch. Here, one HUB is defined as the master brightness sensor in the field, which transmits the correspondingly measured brightness value to all other HUBs in the field (slave). At least one GPS SIM HUB is required for time-accurate switching via the light management system. This HUB supplies the integrated GPS antenna and the connection to satellites in the neighbourhood the exact time and forwards it to neighbouring HUBs via radio. HUBs via radio.



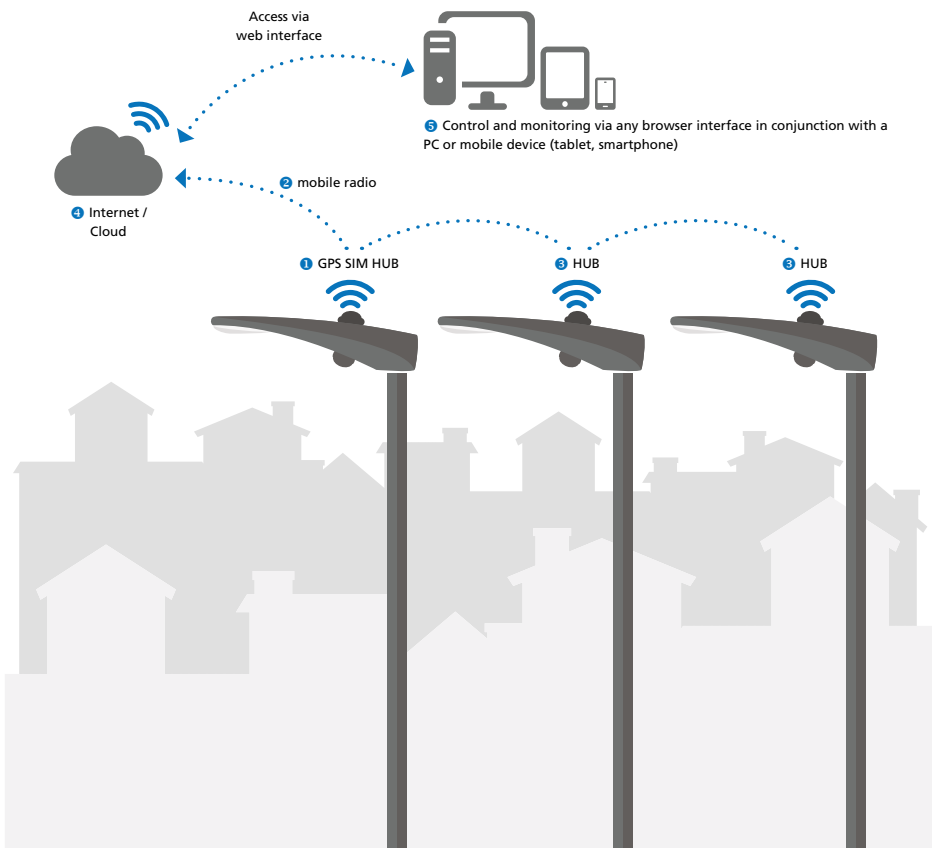
Version with RFL LIMAS HUB3 G2 GPS SIM (cloud connection)

With this system solution, the luminaires can be programmed, read out and monitored remotely using cloud access via any Internet browser and any operating system ⑤. The GPS SIM HUB ① uses its integrated SIM card ② to wirelessly connect neighbouring HUBs ③ to the cloud ④.

The GPS SIM HUB uses the integrated GPS antenna and the connection to satellites in the vicinity to provide the exact time and forwards this to neighbouring HUBs via radio. The exact position is also recorded using satellite technology.

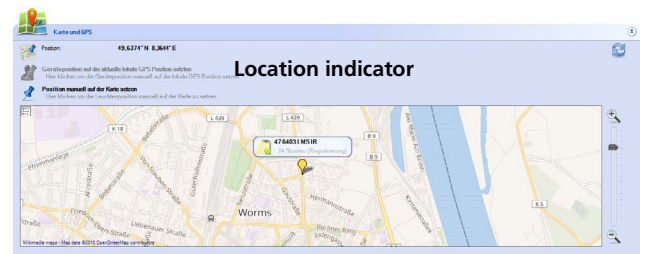
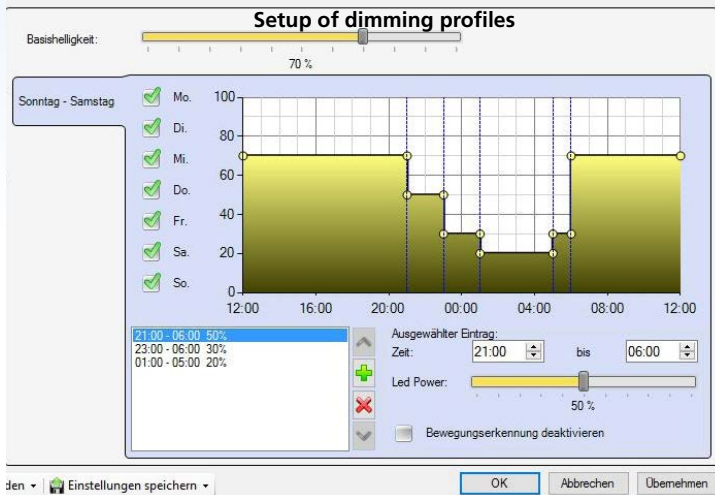
The luminaire parameters such as dimming level, run-on time and behaviour in the event of motion detection are stored in the radio controls/HUBs. The HUBs of the luminaires therefore continue to work independently even without a connection to the cloud. Both items each contain a photocell for twilight switching.

Here, one HUB is defined as the master brightness sensor in the field, which transmits the correspondingly measured brightness value to all other HUBs in the field (slave).



System functions

- **Freely configurable dimming profiles**
based on time of day, duration, dimming level and motion profile
- **Real-time access to the light fittings**
for Instant-On or to alter dimming profiles as required
- **Integrated constant luminous flux function**
to keep the luminous flux constant over the LEDs' entire service life
- **Energy consumption metering**
- **Optional:**
 - Motion detection with a motion sensor (Light on Demand)
 - Optimised On/Off with daylight sensor
 - Time, date, parameter and position monitoring via GPS receiver and GPS-enabled control unit, together with automatic failure notifications with location information

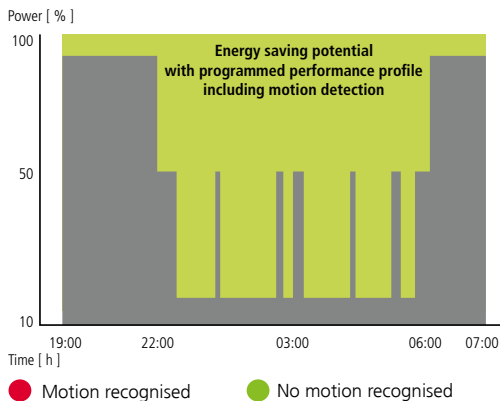


Light Management

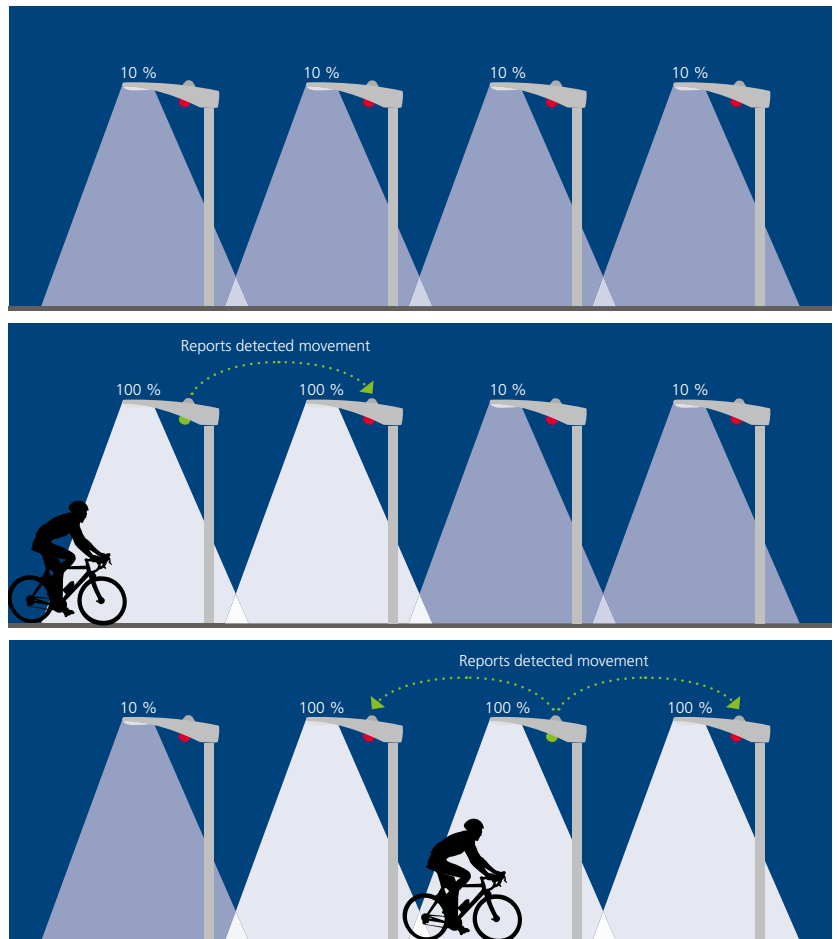
Motion detection - Light on Demand

If a road user passes an RFL luminaire with HUB and motion sensor, this is detected by the motion sensor and, depending on the programming, the luminaire switches from background level 10% to 100% illuminance with a defined follow-up time, e.g. 1 minute.

Neighbouring luminaires can be linked via the light management system in order to set up a leading light. As soon as a motion sensor of a luminaire detects an object in conjunction with a radio control system, the neighbouring luminaires in the street are also switched to a higher lighting level via radio.



The road with cyclists is only used here as an example to clarify the general process.





RFL - Light Fittings Ready for the future

You have the choice - you determine the timing, because luminaires in RFL version (Ready for Light Management System) are prepared for retrofitting light management components and sensors.

One or two Zhaga-compliant sockets integrated into the light fitting housing enable the required system components to be installed at a later date without tools. The use of autarkic sensors without a connection to a light management system is also possible with the RFL luminaires at any time (stand-alone solution).

Thanks to the standardization of the socket according to Zhaga Book 18, you are not tied to a specific light management system. In theory, you have the freedom to choose from all manufacturers who also use standardized Zhaga sockets for their components.

Of course, you can also equip RFL light fittings immediately during the initial installation with the corresponding light management components. If RFL LIMAS HUBs are used (see system components), RFL luminaires can also be combined with LIMAS light fittings.

A hub (also called „node“) is a network device that connects such several devices within a (radio) network. In network technology, it serves as a distributor for the data packages. This will create a wireless local area radio network („Mesh“).

Almost all SCHUCH outdoor light fittings are available in RFL version (see chapter “Outdoor Light fittings“).

In general the following versions are possible

- **RFL0:** with Zhaga socket on the **top side of the housing** for subsequent retrofit of light management components e.g. a controller with antenna (see *system components*)
- **RFLU:** with Zhaga socket at the **bottom of the housing** for subsequent retrofit of sensors to control the light fittings self-sufficient (see *system components*) with motion detector, a standalone solution is also realizable
- **RFL0U:** with Zhaga socket at **top and bottom of the housing**. Thus it's possible to retrofit both, light management components and sensors (see *system components*)

In order to control the light fittings - after appropriate retrofitting of the light management components - the corresponding light management software as well as possibly further components are necessary (see *control components*).




Exclusively D4i control gear is being used in RFL luminaires from Schuch. All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from Schuch. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Advantages



- Implementation of a light management system is possible at any time
- Tool-free, quick and easy installation of the light management system components → simply screw off the socket cap and screw on the system component
- The use of standardised Zhaga Book 18 compliant sockets allows the later use of D4i or SR compliant light management controllers or motion sensors at any time
- In case of using the LIMAS light management system, LIMAS light fittings* and RFL light fittings (equipped with rfl limas HUB) can be combined easily

* Luminaire types with permanently installed radio antenna and light management controller (LMS versions)

More than 3,400 SCHUCH light fittings of the 47 and 48 series with the light management system  LIMAS have been installed in the city of Chur / Switzerland since 2015. As a browser-based solution with gateways, they are spread across the city, enabling light on demand and saving energy costs.

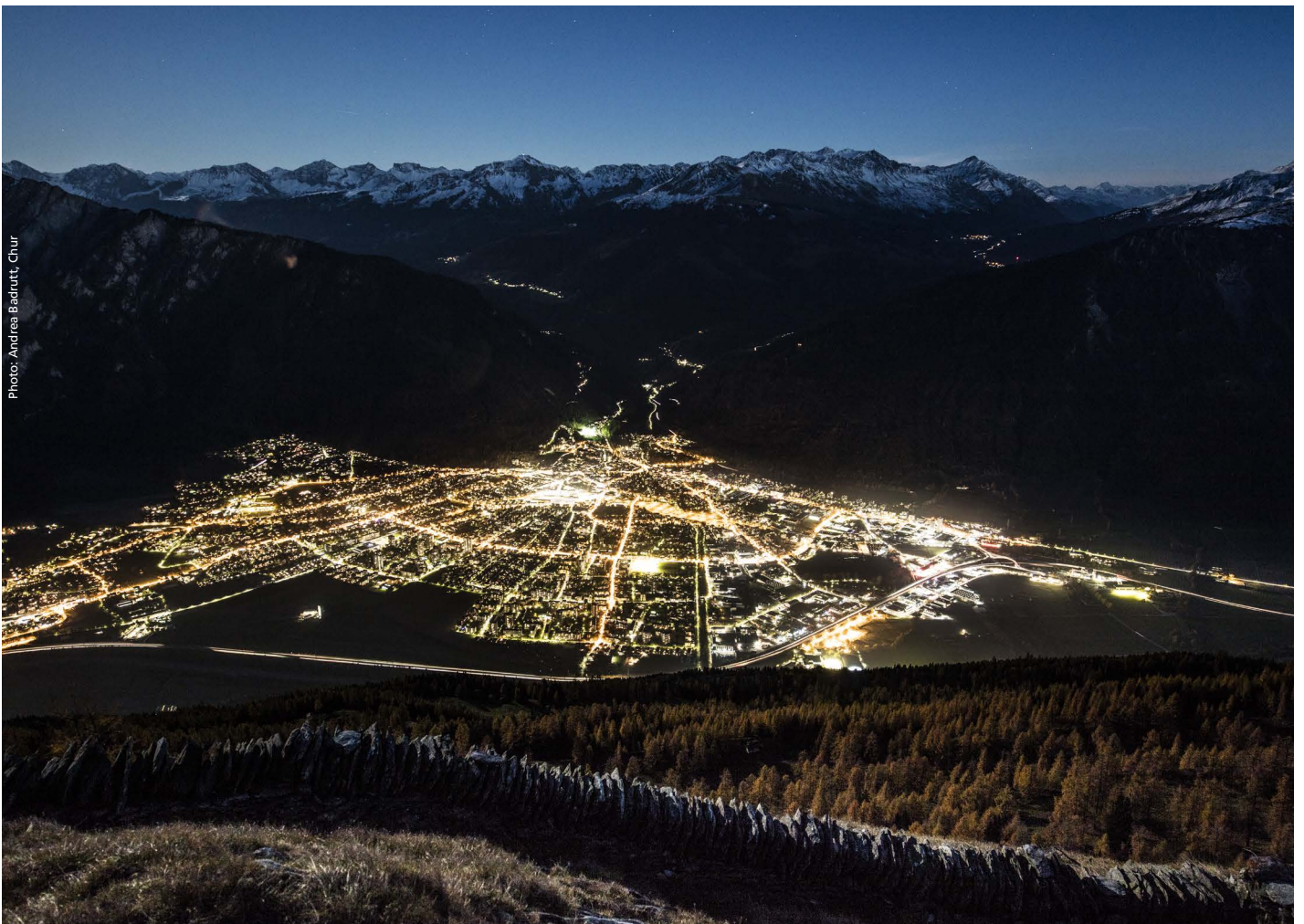









Photo: Andrea Badrutt, Chur

Components for programming or connection to the cloud for RFL luminaires

Art.-No.	Type	
90545 0001	LIMAS Dongle USB	Enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	Control element with photocell/twilight switch, GPS antenna and SIM card

System components for RFL luminaires













Art.-No.	Type		
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	Radio control with GPS antenna (automatic position detection of the luminaire) and photocell (twilight switching) for radio networking of RFL luminaires (2.4 GHz Mesh-Net), with integrated SIM card for connecting a maximum of 128 neighbouring devices/HUBs to the cloud. Enables remote programming/setup and monitoring of the system and is used for timing in the system (GPS)	
90546 9014	RFL LIMAS HUB3 G2	Radio control with photocell (twilight switching) for networking RFL luminaires (2.4 GHz Mesh-Net)	
90546 9011	RFL LIMAS BM RAD HUB LPH max. 8m	Radio control with integrated radar motion sensors for networking RFL luminaires (2.4 GHz Mesh-Net)	
90546 9012	RFL LIMAS BM RAD MA LPH max. 10m	Radio control with integrated radar motion sensors for networking RFL luminaires (2.4 GHz Mesh-Net) for pole mounting	
90546 9000	RFL DS20 HUB 20lux ON/OFF	Twilight switch for autonomous control of RFLO luminaires. Cannot be combined with other system components	
90546 9044	RFL BM/DS IR HUB LPH max. 8m	Infrared motion sensor - can only be used in conjunction with RFL LIMAS HUB3 G2 and RFL LIMAS HUB3 G2 GPS SIM	
90546 9006	RFL BM/DS IR HUB LPH max. 12m	Infrared motion sensor/twilight switch can be used in standalone mode or in conjunction with RFL LIMAS HUB3 G2 and RFL LIMAS HUB3 G2 GPS SIM	

Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

Accessories

Art.-No.	Type	
Request	Sensorbox (SB)	External box connected to the RFL luminaires via radio (2.4 GHz Mesh-Net) to accommodate various components

Operating modes

		Radio networking	Motion detection	Twilight switching	Time-based control	Programming	Connection to the cloud
1	RFL LIMAS HUB3 G2 GPS SIM	✓	✗	✓	✓	 	✓
	+ RFL BM/DS IR HUB LPH max. 8m	✓	✓	✓	✓	 	✓
	+ RFL BM/DS IR HUB LPH max. 12m	✓	✓	✓	✓	 	✓
2	RFL LIMAS HUB3 G2	✓	✗	✓	Optional with article 1		Optional with article 1
	+ RFL BM/DS IR HUB LPH max. 8m	✓	✓	✓	Optional with article 1		Optional with article 1
	+ RFL BM/DS IR HUB LPH max. 12m	✓	✓	✓	Optional with article 1		Optional with article 1
3	RFL LIMAS BM RAD HUB LPH max. 8m	✓	✓	Optional with article 1 or 2	Optional with article 1		Optional with article 1
4	RFL LIMAS BM RAD MA LPH max. 10m	✓	✓	Optional with article 1 or 2	Optional with article 1		Optional with article 1
5	RFL BM/DS IR HUB LPH max. 12m	✗	✓	✓	✗		✗
6	RFL DS20 HUB 20lux ON/OFF *	✗	✗	✓	✗	✗	✗



USB dongle



Cloud connection



App control

* runs independently and cannot be combined with other components



LIMAS Air

Radio-based Light Management System for sports facilities

Whether small field facilities, sports fields or training grounds for football, hockey, tennis, etc., the powerful, energy-efficient and durable floodlights of the AREALO series offer you many possibilities. Our aim is to achieve the best possible result for your sports facility in terms of illuminance, uniformity and glare limitation, taking into

account the requirements of DIN 12193. Among many other advantages, the extremely long service life of the AREALO of at least 100,000 hours is particularly remarkable. With an average of 300-500 operating hours per year, this is an investment for generations, maintenance-free and without regular lamp replacement, as

is the case with conventional installations. With the use of the LIMAS Air light management system, maximum savings can also be achieved in terms of energy costs and CO₂ impact on the environment.

Intelligent light control

Simply switching the floodlights of a sports facility on and off is neither efficient nor cost-saving and environmentally friendly. When converting to LED technology, the question of intelligent lighting control therefore arises. If one then takes into account the subsidies from the federal government within the framework of the municipal guidelines as well as the state sports associations and possibly the respective federal state, which can currently amount to up to 80% cumulatively at peak times, the decision should not be difficult.

Dimming - The introduction to light control

The simplest solution is to dim the floodlights via DALI. Since the maximum illuminance is usually only required for matches and competitions, energy can be saved to a considerable extent by continuously dim-

ming or switching on preset lighting levels during training. All that is required for this is an AREALO in DIMD version.











Smart lighting control with LIMAS Air

With the LIMAS Air light management system, you can conveniently control your floodlighting system via radio, without additional wiring, and save a maximum of energy costs at the same time. The system is configured and controlled via a free app (Android or iOS) using a smartphone or tablet. Neither an internet connection nor a gateway is required for this. The luminous flux of each individual luminaire/mast unit can be controlled separately. In conjunction with push-buttons, the pre-programmed scenes can be called up easily and conveniently, for example match and competition mode, training, half-field lighting or goalkeeper training, etc.

Please contact us. We will be happy to show you the possibilities LIMAS Air offers and support you in planning, projecting and configuring your system.



Control components

Art.-No.	Type		
78512 0001	7850 1VBOX RFL Lite TRA	Distribution box 1-fold for RFL LIMAS Air HUB TRI for 7850 12804SP DIMD as truss structure. Additionally RFL LIMAS Air HUB (90546 9013) is required (not included in delivery).	
78512 0002	7850 2VBOX RFL Lite TRA	Distributor box 2-fold for RFL LIMAS Air HUB TRI for 7850 25604SP DIMD as truss structure. Additionally RFL LIMAS Air HUB (90546 9013) is required (not included in delivery).	
78512 0003	7850 3VBOX RFL Lite TRA	Distribution box 3-fold for RFL LIMAS Air HUB TRI for 7850 38404SP DIMD as truss structure. Additionally RFL LIMAS Air HUB (90546 9013) is required (not included in delivery).	
78512 0010	7850 VBOX RFL Lite TRA	Distributor box for RFL LIMAS Air HUB TRI for 7850 12804SP OV, 7850 25604SP OV, 7850 38404SP OV as truss structure. Additionally RFL LIMAS Air HUB (90546 9013) is required (not included in delivery).	
10183 0002	LIMAS Air Box	Repeater	
90546 9013	RFL LIMAS Air HUB TRI	Light management controller (2.4 GHz mesh network) with radio antenna and RFL base.	
90547 9009	LIMAS Air TAST INTER UP max 4 KONT	Push-button interface for connecting up to 4 analogue push-buttons, mounting in flush-mounted box/branch box.	
90547 9011	LIMAS Air TAST UP max 4 KONT	Battery-free quadruple wireless pushbutton, pressing the pushbutton generates energy to supply the pushbutton electronics.	



Explosion-Protected Light Fittings

Impressive innovation strength in extreme conditions

For more than one hundred years SCHUCH has been considered as an expert in lighting in extreme environments. Applications in explosive gases and dust environments set stringent requirements.

With the results of its own intensive research and design work, as well as more than 100-year experience, SCHUCH still acts as an innovator in this challenging field. Thus, SCHUCH has decisively influenced much on the development of conventional explosion-protected linear light fittings, as well as of the relevant standards. Explosion-protected linear-light fittings with 2-pin technology are inseparably associated with SCHUCH. Using the new LED technology, SCHUCH sets new benchmarks with its innovative solutions. Worldwide, SCHUCH has one of the widest ranges of lighting products providing protection against explosive gases and dusts.

HIGHLIGHTS OF TECHNOLOGICAL DEVELOPMENT - SCHUCH AS A PIONEER

1910

The first SCHUCH mining light fittings illuminate the coal mines in the Saarland and in the Ruhr region and are delivered to the mines in South Africa.

1929

SCHUCH disposes of an extensive range of explosion-protected and mining luminaires, junction boxes, switches and sockets. The product line of explosion-protected light fittings is a major sector within the entire manufacturing program.

1952/53

Introduction of „glass fiber reinforced Polyester“ as material for the housings of explosion-proof light fittings.

1953

First approval of an explosion-protected ceiling light fitting for single-pin fluorescent tubes.

1986

After substantial development work, SCHUCH got the world's first certification of an explosion-protected electronic control gear for 2-pin fluorescent tubes.

1989

World innovation: SCHUCH presents the first explosion-protected linear light fitting with an ECG for standard 2-pin fluorescent tubes. A pioneering solution that enables to generally use conventional fluorescent tubes in explosion-protected light fittings. Thus, SCHUCH became the forerunner of modern explosion-protected linear light fittings.

1998

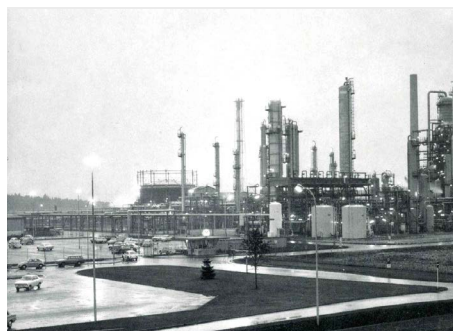
With the world's first approval of an Ex-ECG with „end-of-life“ shutdown, a safety gap in the operation of explosion proof light fittings is being closed - SCHUCH is making history again. Immediately afterwards, this becomes bindingly included in the standards.

2005

First approval of an explosion-protected linear emergency light fitting with a microprocessor-controlled intelligent emergency control unit and an integrated ECG with "end-of-life" cut-off system.

2010

First explosion-protected linear light fitting for Zone 2 and Zone 22 with the application of an energy-saving T5 lamp technology.



Explosiongeschützte Leuchten für Leuchtstofflampen

Schutzart »erhöhte Sicherheit«, Zündgruppe A-D



Einzeilleuchten ein- und zweiflammig

Bandleuchten, ein- und zweiflammig

Explosion-Protected Light Fittings

Product	Series	Page
Lightmanagement		
LIMAS Line - smart wired lighting control		28
Light fittings for Zone 1/21		
Light fittings with diffuser ExeLED 1	e865...	29-31
• with DALI interface	... DIMD	30
• for high ambient temperatures	... H..	30
• for low ambient temperatures	... T40	30
Emergency light fittings ExeLED 1 N	e864...	32-33
Light fittings with diffuser with central locking system	e840...	34-35
Pole mounted light fittings	e840... PM	35
Compact light fittings with diffuser	e855...	36-37
Compact emergency light fittings	e856...	38-39
Steep roof light fitting	e821...	40-41
• with DALI interface	... DIMD	41
High bay light fittings ExSTREAM	e8825...	42-43
• with DALI interface	... DIMD	43
Floodlights ExSTREAM	e8820...	44-45
• with DALI interface	... DIMD	45
Ceiling- or Wall-mounting light fitting ExGLOBE	e9312...	46
Handlamp ExSPECT	e9310...	47
Light fittings for Zone 2/22		
Light fittings with diffuser ExeLED 2	nD866...	48-50
• with DALI interface	... DIMD	49
• for high ambient temperatures	... H..	49
Emergency light fittings ExeLED 2 N	nD867...	51-53
Compact emergency./ escape light fittings	nD8611...	54-55
Steep roof light fitting	nD822...	56-57
High bay light fittings ExDUEVO	nD8301/02...	58-59
Floodlights ExFOCO L	nD8700...	60-61
Plane surface floodlights ExFOCO L	nD8700... A	61
Floodlights ExFOCO XL	nD8800...	62-63
Plane surface floodlights ExFOCO XL	nD8800... A	63
Ex-Installation material		
Carrier rail systems	TRS 2000	64
	AL	64
Through wiring systems	DV	65
Wall sockets	4216	66
Plugs	4210	66
Installation switches	8040	67
Junction boxes	8118	67

LED TECHNOLOGY

2011

SCHUCH brought the first EX-protected LED headlights, emergency and compact light fittings to market maturity.

2014

First approval of explosion-protected linear LED light fittings, high bay LED light fittings and LED floodlights for Zone 2/22.

2016

World's first explosion-protected linear light fitting for Zone 1/21 using an innovative LED casting technique.

2017-19

The range of LED light fittings is expanding at a rapid pace. The ExeLed1 N and ExeLed 2 N emergency light fittings, LED floodlights and surface floodlights follow in short intervals.

2020-2023

With the introduction of steep roof light fittings, floodlights and high bay light fittings of the ExSTREAM Zone 1/21 series, compact wall and ceiling mounted light fittings and the hand lamp e9310, the LED range gets expanded continuously.





LIMAS Line BASIC/PRO - smart wired lighting control (BASIC) or including monitoring of self-contained emergency light fittings (PRO) of DALI luminaires (DIMD or DIMDI)

With the LIMAS Line light management system, every DIMD light fitting from SCHUCH becomes a smart light fitting and brings you major economic and ecological benefits.

LIMAS Line is available in 2 versions:

LIMAS Line BASIC enables fully automated, dynamic light in conjunction with the corresponding sensors. Configuration is carried out using a smart end device (Android or iOS) via Bluetooth. This only requires a free app with which the room to be illuminated can be recreated and equipped and configured with luminaires, sensors and push-buttons.

LIMAS Line PRO offers you extended options and additional functions. In addition to DALI luminaires (DIMDI), all self-contained luminaires (DI und DIMDI) in the SCHUCH portfolio can also be controlled and monitored. Configuration and control are carried out via PC without additional software - a browser is sufficient. The connection between the PC and LIMAS Line PRO can be realised either via an existing network or by establishing a peer-to-peer connection. An Internet connection is not required. For further details and properties, see the chapter on lighting management systems.

Control components (Installation outside the explosion-protected area only)

LIMAS Line BASIC SCS



LIMAS Line PRO SCE



Type	Art.-No.	
LIMAS Line BASIC SCS	90545 0005	DALI2 controller for controlling up to 64 devices.
LIMAS Line PRO SCE	90545 0031	DALI2 controller for controlling up to 192 devices. Monitoring of single battery emergency lights possible.

System components (Installation outside the explosion-protected area only)

LIMAS Line IC



LIMAS Line DALI PS 240mA



LIMAS Line BM/DS PIR 4,0-14,0m R STE



LIMAS Line BM/DS HF 2,0-4,0m R STE



LIMAS Line MK4x10A



Type	Art.-No.	
LIMAS Line IC	90545 0015	DALI-2 input controller with 4 independent inputs for connection of floating contacts/buttons.
LIMAS Line DALI PS 240mA	90545 0016	DALI bus power supply with max. 240mA.
LIMAS Line BM/DS PIR 2,5-2,8m R STE	90545 0035	Infrared DALI2 motion detector including light sensor for mounting heights of 2.5-4m.
LIMAS Line BM/DS PIR 4,0-14,0m R STE	90545 0036	Infrared DALI2 motion detector including light sensor for heights up to 14m.
LIMAS Line BM/DS PIR 4,0-16,0m Q STE	90545 0037	An infrared DALI2 motion detector with light sensor. Motion detector for mounting height up to 16m.
LIMAS Line BM/DS PIR 1,8-2,5m RH STE	90545 0038	Infrared DALI2 motion detector with light sensor for vertical wall mounting for height up to 2.5m.
LIMAS Line BM/DS PIR 2,5-5,0m Q STE	90545 0039	Infrared DALI2 motion detector with light sensor. For a mounting height of up to 5m and a maximum detection area of 6m x 23m.
LIMAS Line BM/DS HF 2,0-4,0m R STE	90545 0040	HF DALI2 motion detector with light sensor for a mounting height of up to 4.8m and a maximum diameter of the detection area of 8m.
LIMAS Line MK4x10A	90545 0041	Four potential-free relays, switchable with DALI. Suitable for signaling test and system states of single battery emergency lights.

ExeLED 1

LED-Light Fitting for Ex-Zone 1/2/1

Series e865...

Applications:

Hazardous locations of zones 1/2 (gas) and 21/22 (dust).

Design:

Housing: Glass fibre reinforced polyester resin.

Cover: Injected polycarbonate, frosted (F) or clear, silicone gasket.

Closure: Stainless steel clips (KE), two of them as safety clip (KES), to be opened with screwdriver only.

Reflector: Sheet Steel, painted, carrying the encapsulated LED-modules, clipped into the cover, removable as a unit.

Connection: 3 poles up to 4 mm².

Cable entries: 3 entries M25 x 1,5, (2 glands - one of them is plugged)

Standard: Facing downwards or forwards.

Mechanical installation:

Mounting accessories see spare parts/ accessories.

Technical Data:

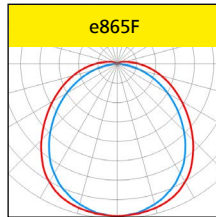
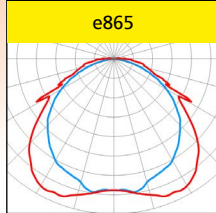
LED: Line modules with clear cover appr. 6,500K, with frosted cover appr. 6,000K, CRI > 80, service life L₈₀ > 100.000h at max. ambient temperature, L₉₀ > 85.000h (06L..) at 25°C ambient temperature, L₉₀ > 80.000h (12L..) at 25°C ambient temperature

ECC: 220-240V AC/DC, 0 or 50/60Hz, overvoltage, overload and short circuit protection

Options:

- 4.500K, light colour 845
- for connection to group or central battery (light fittings of version ZB only) or emergency mains respectively
- for explosive dust atmospheres Zone 21 (**t868...**)

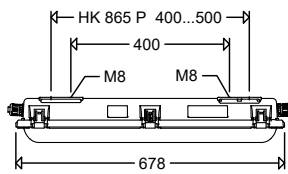
- for higher ambient temperatures up to +70°C
- with through wiring system
- with monitoring module for monitoring the individual light fitting



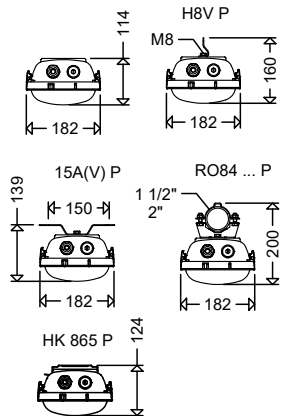
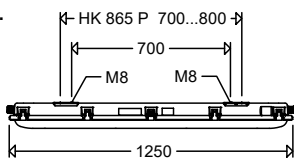
Note:

This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

e865 06L..



e865 12L..



Pole mount with pipe clamps RO84P

Product highlights:

- the light fittings are suitable for use in food areas IFS
- innovative encapsulation with high transmission rate
- LED-Modules protected from mechanical or electrostatic damages by sandwich design of reflector and cover
- homogeneous illumination by using frosted diffusers (versions e865F..) no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering index CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- FastFix mounting, system for variable mounting distances and easy installation (retaining clips HK865 P) without opening the fitting
- sustainable, control gear and reflector with LED-modules replaceable by qualified personnel on-site
- the light fittings are suitable for use in food areas (IFS/HACCP), see chapter 9.1 in the „Technical Supplement“

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Cover frosted	Cover clear	Ta max [°C]	Substitute for * Weight [kg] (without packing material)
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e865...



II 2 G Ex eb mb
q IIC T4 Gb

II 2 D Ex tb
IIIC T80°C Db

IP66



EU-Type Examination Certificate:

ATEX: IBExU 16 ATEX 1008

Other approvals:

IECEX: IECEX IBE 16.0010

UKCA: BAS21UKEX0579

Ignition protection: eb

Marking:

II 2 G Ex eb mb q IIC T4 Gb (Zone1)

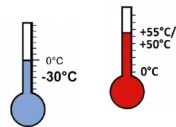
II 2 D Ex tb IIIC T80°C Db (Zone 21)

Rated voltage: 220-240V AC/DC, 0 or 50/60Hz.

Permissible ambient temperature:

-30°C up to see article table

The values given are for versions with through wiring.



86500 0050	e865F 06L22	15	2.170	145	•	55	2 x 18W	4,6
86500 0051	e865F 06L42	28	4.120	147	•	55	2 x 36W	4,7
86500 0052	e865F 06L60	40	5.700	143	•	50	2 x 58W	4,7
86500 0001	e865F 12L42	28	4.360	156	•	55	2 x 36W	6,7
86500 0002	e865F 12L60	40	6.020	151	•	55	2 x 58W	6,7
86500 0003	e865F 12L85	54	8.620	160	•	50	> 2 x 58W	7,0
86500 0011	e865 12L42	28	4.590	164	•	55	2 x 36W	6,7
86500 0012	e865 12L60	40	6.320	158	•	55	2 x 58W	6,7
86500 0013	e865 12L85	54	9.010	167	•	50	> 2 x 58W	7,0

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

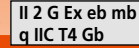


Looping the cable on one side:

All light fittings of series e865... have got 2 cable entries on one small side of the housing for cable looping instead of the through wiring system.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Cover frosted	Cover clear	Ta max [°C]	Substitute for *	Weight [kg] (without packing material)
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e865... DIMD



dimmable via DALI interface

Design:

Same as standard version, but with DALI2 compatible ECG and 2 additional clamping points, marked with DA, the polarity does not matter.

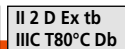
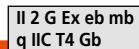
Compatible with LIMAS Line BASIC/PRO Light Management System.

Note:

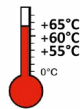
The conducting wires to the control input must be mains voltage stable and can be integrated in the connection cable.

86500 0952	e865F 06L42 DIMD	28	4.120	147	•		55	2 x 36W	4,7
86500 0953	e865F 06L60 DIMD	40	5.700	143	•		50	2 x 58W	4,7
86500 0914	e865F 12L42 DIMD	28	4.360	156	•		55	2 x 36W	6,7
86500 0913	e865F 12L60 DIMD	40	6.020	151	•		55	2 x 58W	6,7
86500 0903	e865F 12L85 DIMD	54	8.620	160	•		50	> 2 x 58W	7,0

e865... H..



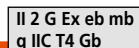
for high temperature ¹⁾



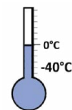
86500 0053	e865F 06L22 H65	15	2.170	145	•		65	2 x 18W	4,6
86500 0054	e865F 06L42 H60	28	4.120	147	•		60	2 x 36W	4,7
86500 0055	e865F 06L60 H55	40	5.700	143	•		55	2 x 58W	4,7
86500 0910	e865F 12L42 H65	28	4.360	156	•		65	2 x 36W	6,7
86500 0902	e865F 12L60 H65	40	6.020	151	•		65	2 x 58W	6,7

NEW

e865... T40



for low ambient temperatures down to -40°C



86500 0065	e865F 06L22 T40	15	2.170	145	•		55	2 x 18W	4,6
86500 0066	e865F 06L42 T40	28	4.120	147	•		55	2 x 36W	4,7
86500 0023	e865F 12L42 T40	28	4.360	156	•		55	2 x 36W	6,7
86500 0024	e865F 12L60 T40	40	6.020	151	•		55	2 x 58W	6,7

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

¹⁾ through-wiring or looping the cable is not permissible.

Accessories / Spare Parts

Article No.	Type	
Spare diffusers		
86601 9001	ABD 8654F	cover, frosted PC diffuser, for e864 12 ..., e865 12..., nD866 12..., nD867 12 ...
86601 9014	ABD 8652F	cover, frosted PC diffuser, for e864 06 ..., e865 06 ..., nD866 06 ..., nD867 06 ...
86601 9000	ABD 8654	cover, diffuser PC clear, for e864 12 ..., e865 12 ..., nD866 12 ..., nD867 12 ...
Fasteners		
90055 9004	KE/KES VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.) see picture on the left, for e 865 12L.. until year of manufacture 2020
90055 9005	KES P	1 pair of safety clips stainless steel for e865 12L.. until year of manufacture 2020
90055 9007	KE/KES G2 VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.) see picture on the left, for e 865 12L.. from year of manufacture 2020 and for e 865 06L..
90055 9006	KES G2 P	1 pair of safety clips stainless steel for e865 12L.. from year of manufacture 2020 and for e865 06L..
Glands/breather		
90117 9006	2537 G	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	2538 G	ex-protected plastic plug M25 x 1,5 with nut
90119 9001	2539 G	ex-protected plastic plug M25 x 1,5 with blanking plug and locknut
90259 9000	KS25 EX	ex-breather M25 x 1,5
Mounting material		
86501 9003	HK 865 P	2 retaining clips for variable mounting distances
90001 0002	H8V P	2 suspensions eyes with bolts, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 ½", stainless steel, with support also for pole mounting
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support also for pole mounting
26000 0008	W 26 L P	2 wall mounting angles, hot galvanized steel
26000 0002	W 26/30 P	2 wall mounting angles 30°, hot galvanized steel
26000 0003	W 26/45 P	2 wall mounting angles 45°, hot galvanized steel

Fasteners

KE/KES VE10
KES P

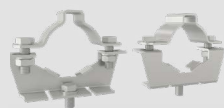


KE/KES G2 VE10
KES G2 P



Pipe clamps

2 pipe clamps 1 ½",
stainless steel, with
support



2 pipe clamps 2",
stainless steel, with
support





ExeLED 1 N LED-Emergency Light Fitting for Ex-Zone 1/21 Series e864...

Applications:

Hazardous locations of Zones 1/2 (gas) and 21/22 (dust), for illuminating escape routes.

Design:

Housing: Glass fibre reinforced polyester with separate battery box at one small side of the housing.

Cover: Injected polycarbonate, frosted (F) or clear, silicone gasket.

Closure: Stainless steel clips (KE), two of them as safety clip (KES), to be opened with screwdriver only.

Reflector: Sheet Steel, painted, carrying the encapsulated LED-modules, clipped into the cover, suspendable.

Connection: 4 poles up to 4mm².

Cable entries: 2 entries M25 x 1,5 at one small side of the housing, (2 glands - one of them is plugged)

Standard: Facing downwards or forwards.

Mechanical installation:

Mounting accessories see spare parts/accessories.

Technical Data:

LED: Line modules with clear cover appr. 6,500K, with frosted cover appr. 6,000K, CRI > 80, service life L₈₀ > 100.000h at max. ambient temperature, L₉₀ > 95.000h (06L..) at 25°C ambient temperature, L₉₀ > 85.000h (12L..) at 25°C ambient temperature

ECG with an integrated emergency control unit

Incorporated NiCd battery, electronic charger, short circuit protected battery and reverse battery protection

Electronic deep discharge protection: acc. to EN 61347-2-7

Re-charging time: 24h, acc. to EN 60598-2-22

Automatic monitoring: of the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire

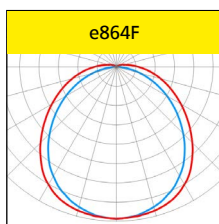
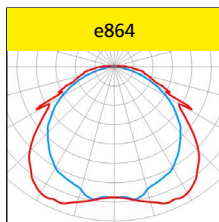
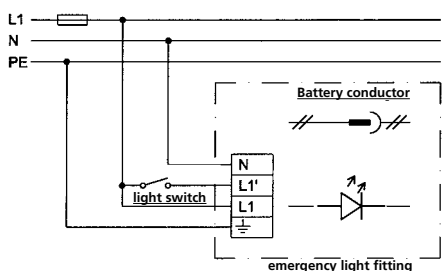
Mode of operation:

maintained operation = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

stand-by operation = switching on in case of mains failure.

Options:

- 4.500K, light colour 845
- remote switch
- Emergency lighting unit with DALI interface for dimming and central monitoring, compatible with LIMAS Line PRO (DIMDI) Light Management System
- with through wiring system



Starting:

Connect battery conductor.

Out-of-operation: separate battery conductor.

Stand-by operation: Do not connect L1'.

Product highlights:

- safety in case of an emergency, instant light with maximum light output
- operation in maintained, switched maintained or stand-by mode possible
- multifunctional LED with coded indication of the functions, states and potential faults of the electronic device and the battery
- automatic weekly function test
- automatic annual duration test
- manual actuation of duration test is possible
- easy battery replacement due to connector
- innovative encapsulation with high transmission rate
- LED-Modules protected from mechanical or electrostatic damages by sandwich design of reflector and cover
- homogeneous illumination by using frosted diffusers (versions e864F..) no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering index CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- **FastFix mounting**, system for variable mounting distances and easy installation (retaining clips HK865 P) without opening the fitting
- **sustainable**, control gear and reflector with LED-modules replaceable by qualified personnel on-site

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

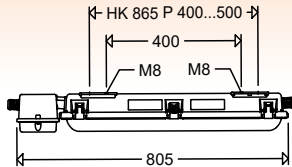
All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous flux [lm] (emergency)	Luminous efficacy [lm/W]	Cover frosted	Cover clear	1h operation time	3h operation time	Ta max [°C]	Substitute for *	Weight [kg] (without packingmaterial)
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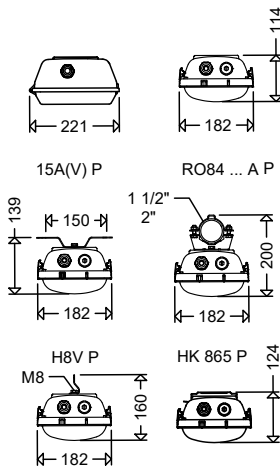
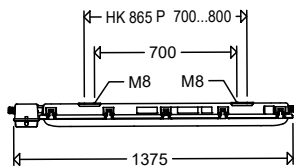
Note:

This light fitting is not suitable for applications in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

e864 06L... H



e864 12L...



Fasteners

KE/KES VE10
KES P



KE/KES G2 VE10
KES G2 P



e864...



II 2 G Ex db eb [ib] mb q IIC T4 Gb

II 2 D Ex tb IIIC T80°C Db

IP66



EU-Type Examination Certificate:

ATEX: IBEEx 17 ATEX 1026

Other approvals:

IECEX: IECEX IBE 17.0016

UKCA: BAS21UKEX0581

Marking:

II 2 G Ex db eb [ib] mb q IIC T4 Gb (Zone 1)

II 2 D Ex tb IIIC T80°C Db (Zone 21)

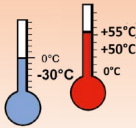
Ignition protection: ec

Rated voltage: 220-240V AC, 50/60Hz.

Permissible ambient temperature:

-30°C up to +55°C

Normal range acc. to EN 60598-2-22 0°C up to 45°C, reduced emergency light duration if operated below 0°C.



86400 0050	e864F 06L22/1/1,6	18	2.170	700	121	•	•	•	55	2 x 18W	6,2
86400 0052	e864F 06L42/1/1,6	29	4.100	700	141	•	•	•	50	2 x 36W	6,4
86400 0051	e864F 06L22/3/4	18	2.170	700	121	•	•	•	55	2 x 18W	6,4
86400 0053	e864F 06L42/3/4	29	4.100	700	141	•	•	•	50	2 x 36W	6,6
86400 0001	e864F 12L42/1/1,6	29	4.360	750	150	•	•	•	55	2 x 36W	7,6
86400 0002	e864F 12L60/1/1,6	41	6.020	750	147	•	•	•	55	2 x 58W	7,6
86400 0101	e864F 12L42/3/4	29	4.360	750	150	•	•	•	55	2 x 36W	8,0
86400 0102	e864F 12L60/3/4	41	6.020	750	147	•	•	•	55	2 x 58W	8,0
86400 0011	e864 12L42/1/1,6	29	4.590	800	158	•	•	•	55	2 x 36W	7,6
86400 0012	e864 12L60/1/1,6	41	6.320	800	155	•	•	•	55	2 x 58W	7,6
86400 0111	e864 12L42/3/4	29	4.590	800	158	•	•	•	55	2 x 36W	8,0
86400 0112	e864 12L60/3/4	41	6.320	800	155	•	•	•	55	2 x 58W	8,0

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Accessories / Spare Parts

Article No.	Type	
Spare batteries		
90222 9021	AKKU 2627 4,0Ah	Spare battery 4.0Ah
90222 9023	AKKU 8020 1,6Ah	Spare battery 1.6Ah
Spare covers		
86601 9014	ABD 8652F	cover, frosted PC diffuser, for e864 06 ..., e865 06 ..., nD866 06 ..., nD867 06 ...
86601 9001	ABD 8654F	cover, frosted PC diffuser, for e864 12 ..., e865 12..., nD866 12..., nD867 12 ...
86601 9000	ABD 8654	cover, diffuser PC clear, for e864 12 ..., e865 12 ..., nD866 12 ..., nD867 12 ...
Fasteners		
90055 9004	KE/KES VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.) see picture on the left, for e 864 12L.. until year of manufacture 2020
90055 9005	KES P	1 pair of safety clips stainless steel for e864 12L.. until year of manufacture 2020
90055 9007	KE/KES G2 VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.) see picture on the left, for e 864 12L.. from year of manufacture 2020 and for e 864 06L..
90055 9006	KES G2 P	1 pair of safety clips stainless steel for e864 12L.. from year of manufacture 2020 and for e864 06L..
Glands/breather		
90117 9006	2537 G	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	2538 G	ex-protected plastic plug M25 x 1,5 with nut
90119 9001	2539 G	ex-protected plastic plug M25 x 1,5 with blanking plug and locknut
90259 9000	KS25 EX	ex-breather M25 x 1,5
Mounting material		
86501 9003	HK 865 P	2 retaining clips for variable mounting distances
90001 0002	H8V P	2 suspensions brackets, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26 L P	2 wall mounting angles, hot galvanized steel
26000 0002	W 26/30 P	2 wall mounting angles 30°, hot galvanized steel
26000 0003	W 26/45 P	2 wall mounting angles 45°, hot galvanized steel



LED-Light Fitting for Ex-Zone 1/21 Series e840...

Applications:

Hazardous locations of Zone 1/2 (gas) and 21/22 (dust) .

Design:

Housing: Glass fibre reinforced polyester resin.

Cover: Clear polycarbonate with internal prisms, hinged, silicone gasket.

Central locking system: Operated by a hexagonal socket wrench 13mm.

Reflector: Aluminium, carrying the encapsu-

lated LED-modules with frosted covers for glare limitation, hingeable and removable.

Connection: 3 poles up to 4 mm².

Cable entries: 3 entries M25 x 1,5, (2 glands - one of them is plugged), PM-version: 1 x M20 x 1,5..

Standard: Facing downwards or forwards.

Mechanical installation:

Mounting accessories see spare parts/ accessories.

Technical Data:

LED: Line modules appr. 6,500K, CRI > 80, service life L₈₀ > 100.000h at max. ambient temperature, L₉₀ > 85.000h (06L..) at 25°C ambient temperature, L₉₀ > 75.000h (12L..) at 25°C ambient temperature

ECG: 220-240V AC/DC, 0 or 50/60Hz, overvoltage, overload and short circuit protection

Options:

- 4.500K, light colour 845
- for connection to group or central battery (light fittings of version ZB only) or emergency mains respectively
- with monitoring module for monitoring the individual light fitting
- Control gear with dimming function via DALI2-compatible interface, suitable

for the LIMAS Line BASIC/PRO Light Management System (DIMD)

- with through-wiring 5 x 2,5mm²

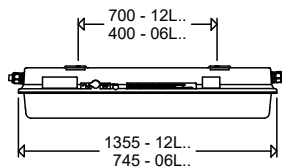
- for higher ambient temperatures up to +65°C depending on version

- with through wiring system

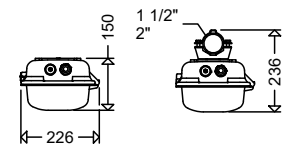


Note:

This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

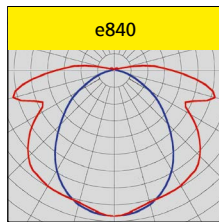
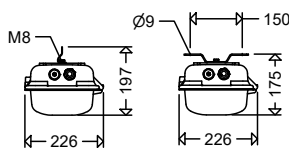


RO84 ... A P



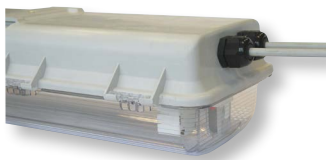
H8V P

15A(V) P



Product highlights:

- extremely robust construction of housing and diffuser
- comfortable central locking mechanism for easy maintenance
- innovative encapsulation with high transmission rate
- homogeneous lighting distribution by frosted anti-glare modules-protecting the LEDs as well of ESD and mechanical damage. No individual light points visible, comfortable perception of light, brilliant glare limitation.
- high colour rendering index CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- sustainable, control gear and reflector with LED-modules replaceable by qualified personnel on-site
- the light fittings are suitable for use in food areas (IFS/HACCP), see chapter 9.1 in the „Technical Supplement“



Looping the cable on one side:

All light fittings of series e840... have got 2 cable entries on one small side of the housing for cable looping instead of the through wiring system.

Properties, limitations and details for controlling LED-light fittings:

- See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ta max [°C]	Substitute for *	Weight [kg] (without packing material)
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e840...



II 2 G Ex eb mb op is q IIC T4 Gb

II 2 D Ex op is tb IIIC T80°C Db

IP66



EC-Type Examination Certificate:

ATEX: IBExU 19 ATEX 1135

Other approvals:

IECEX: IECEX-Nr. IBE 19.0027

Ignition protection: eb

Marking:

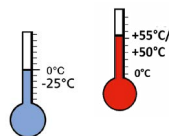
II 2 G Ex eb mb op is q IIC T4 Gb (Zone1)

II 2 D Ex op is tb IIIC T80°C Db (Zone 21)

Rated voltage: 220-240V AC/DC, 0 or 50/60Hz.

Permissible ambient temperature:

-25°C up to see article table



84005 0011	e840 06L22	16	2.054	128	55	2 x 18W	5,6
84005 0012	e840 06L42	28	4.067	145	55	2 x 36W	5,7
84005 0001	e840 12L42	28	4.230	151	55	2 x 36W	8,0
84005 0002	e840 12L60	40	5.850	146	55	2 x 58W	8,0
84005 0003	e840 12L85	54	8.300	154	50	> 2 x 58W	8,5

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ta max [°C]	Substitute for *	Weight [kg] (without packing material)
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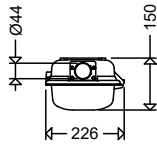
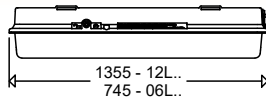
e840... PM



II 2 G Ex eb mb
op is q IIC T4 Gb

II 2 D Ex op is
tb IIIC T80°C Db

IP66



Pole mounted light fitting with integrated mounting system

EU-Type Examination Certificate:

ATEX: IBEExU 19 ATEX 1135

Other approvals:

IECEX: IECEx-Nr. IBE 19.0027

Ignition protection: eb

Marking:

II 2 G Ex eb mb op is q IIC T4 Gb (Zone 1)

II 2 D Ex op is tb IIIC T80°C Db (Zone 21)

Rated voltage: 220-240V AC/DC,
0 or 50/60Hz

Mechanical installation: integrated mounting system 06L: Ø 42 x 150mm (Length)
12L: Ø 42 x 245mm (Length)

Permissible ambient temperature:
-25°C up to see article table

84005 0911	e840 06L22 PM	16	2.054	128	55	2 x 18W	7,9
84005 0912	e840 06L42 PM	28	4.067	145	55	2 x 36W	8,0
84005 0901	e840 12L42 PM	28	4.230	151	55	2 x 36W	8,1
84005 0902	e840 12L60 PM	40	5.850	146	55	2 x 58W	8,1
84005 0903	e840 12L85 PM	54	8.300	154	50	> 2 x 58W	8,7

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Accessories / Spare Parts

Article No.	Type	
Spare diffuser		
84001 9008	ABD 8402 SIL	cover, diffuser PC clear, silicone seal, for e840 06 ..., nD844 06... each up to year of manufacture 2017, in some cases also 2018/2019 (FA number required)
84001 9009	ABD 8402 SIL G	Cover, diffuser PC clear, silicone seal, for e840 06 ..., nD844 06... from year of manufacture 2020, in some cases also 2018/2019 (FA number required)
84001 9004	ABD 8404 SIL	cover, tray PC clear, silicone seal, for e840 12 ..., nD844 12 ..., 144 12 ...
Cable glands/breather		
90117 9006	2537 G	ex-protected plastic cable gland M25 x 1,5 with locknut
90118 9006	2538 G	ex-protected plastic plug M25 x 1,5 with locknut
90119 9001	2539 G	ex-protected plastic plug M25 x 1,5 with blanking plug and locknut
90259 9000	KS25 EX	ex-breather M25 x 1,5
Mounting material		
90001 0002	H8V P	2 suspensions eyes with bolts, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90000 0011	84 AA P	1 pair of brackets, stainless steel, for compensating the different mounting distances of types e840 / e152 or e841 / e148
90037 0004	RO84 112 A P	2 pipe clamps 1 ½", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26 L P	2 wall mounting angles, hot galvanized steel
26000 0002	W 26/30 P	2 wall mounting angles 30°, hot galvanized steel
26000 0003	W 26/45 P	2 wall mounting angles 45°, hot galvanized steel

Small LED-Light Fittings for Ex-Zone 1/21 Series e855...



Applications:

Hazardous areas in Zones 1/2 (gas) and 21/22 (dust) as standard illumination for small rooms and above doors, i.e. as information or escape route lighting with pictograms.

Design:

Housing: Glass fibre reinforced polyester resin.

Diffuser: Clear polycarbonate, frosted, detachable, silicone gasket.

Reflector: Sheet steel, painted white,

detachable, carrying the encapsulated LED-modules and protection cover.

Central locking system: Operated by a hexagonal box spanner 13mm.

Connection: Prepared for looping the mains cable. Terminal L1+N+PE; up to 2,5mm².

Cable entries: 2 entries M25 x 1.5 at one of the front side (2 cable glands, 1 with blanking plug).

Mounting: Side fixing brackets allow direct mounting on to walls or ceilings.

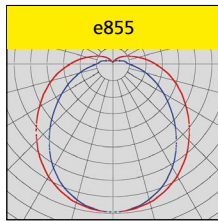
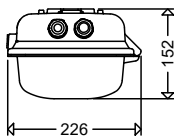
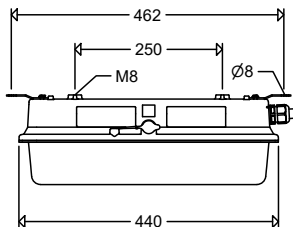
Technical Data:

LED: Line modules appr. 6,500K, CRI > 80, service life L₈₀ > 100.000h at max. ambient temperature, L₉₀ > 95.000h at 25°C ambient temperature

ECG: 220-240V AC/DC, 0 or 50/60Hz, overvoltage, overload and short circuit protection

Note:

This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.



Options:

- for connection to group or central battery (light fittings of version ZB only) or emergency mains respectively
- with monitoring module for monitoring the individual light fitting

- Control gear with dimming function via DALI2-compatible interface, suitable for the LIMAS Line BASIC/PRO Light Management System (DIMD)
- preparation for a 5-core looping

Product highlights:

- extremely robust construction of housing and diffuser
- comfortable central locking mechanism for easy maintenance
- innovative encapsulation with high transmission rate
- LED protecting cover against ESD and mechanical damage
- homogeneous illumination due to frosted covers on the reflector for glare limitation, no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering index CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- sustainable, control gear and reflector with LED-modules replaceable by qualified personnel on-site



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Suitable for pictogram	Ta max [°C]	Substitute for *	Weight [kg] (without packing material)
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e855...



II 2 G Ex eb mb
op is q II C T4 Gb

II 2 G Ex db eb mb
op is q II C T4 Gb

II 2 D Ex op is tb
IIIC T80°C Db

IP66



EU-Type Examination Certificate:

IBExU 17 ATEX 1132

Other approvals:

IECEx IBE 17.0037

Type of protection: eb (increased safety)

Marking:

II 2 G Ex eb mb op is q II C T4 Gb (Zone 1)

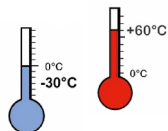
II 2 D Ex op is tb IIIC T80°C Db (Zone 21)

Rated Voltage: 220-240V AC, 176-275V

DC, 50/60Hz

Permissible ambient temperature:

-30°C up to see article table



85500 0007	e855F L05	5	510	102		60	1 x 8W	5,0
85500 0001	e855F L10	10	1.060	106		60	2 x 8W	5,0
85500 0002	e855F L20	18	2.050	114		60	2 x 18W	5,1
85500 0003	e855F L10 DIMD	10	1.060	106		60	2 x 8W	5,0
85500 0004	e855F L20 DIMD	18	2.050	114		60	2 x 18W	5,1



* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Suitable for pictogram	Ta max [°C]	Substitute for *	Weight [kg] (without packing material)
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e855... ZB  **II 2 G Ex eb mb op is q II C T4 Gb** **II 2 G Ex db eb mb op is q II C T4 Gb** **II 2 D Ex op is tb III C T80°C Db** **IP66** 

for connection to central power supply unit

EU-Type Examination Certificate: IBExU 17 ATEX 1132
 Other approvals: IECEx IBE 17.0037
 Type of protection: eb (increased safety)
 Marking: II 2 G Ex eb mb op is q IIC T4 Gb (Zone 1)
 II 2 D Ex op is tb III C T80°C Db (Zone 21)

Rated Voltage: 220-240V AC, 176-275V DC, 50/60Hz
 Permissible ambient temperature: -30°C up to see article table

85500 0009	e855F L05 ZB	5	510	102	•	60	1 x 8W	5,0
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* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Photo: BASF

Explosion protected Light Fittings

Accessories / Spare Parts



Self-adhesive pictograms for identification of escape routes acc. to DIN EN ISO 7010 and ASR A1.3.



121/33 W .../34 W .../35 W

Viewing distance = 30m

Article No.	Type	
Spare diffuser		
85501 9001	ABD 855	cover, diffuser PC frosted, silicone seal, for e855 ..., e856 ...
Cable entries/Glands/Breather		
90117 9000	2537	ex-protected plastic cable gland M25 x 1,5
90118 9000	2538	ex-protected plastic plug M25 x 1,5
90119 9000	2539	ex-protected plastic plug M25 x 1,5 with blanking plug
90259 9000	KS25 EX	ex-breather M25 x 1,5
Mounting material		
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26 L P	2 wall mounting angles, hot galvanized steel
26000 0002	W 26/30 P	2 wall mounting angles 30°, hot galvanized steel
26000 0003	W 26/45 P	2 wall mounting angles 45°, hot galvanized steel
Self-adhesive pictograms		
12112 0006	121/33 W	emergency exit to the left
12112 0007	121/34 W	emergency exit to the right
12112 0008	121/35 W	emergency exit below



Small LED-Emergency Light Fitting for Ex-Zone 1/21 Series e856 ...

Applications:

Hazardous areas in Zones 1/2 (gas) and 21/22 (dust) as safety illumination e.g. for workstations with special hazard, i.e. as information or escape route lighting with pictogram for identification of escape routes.

Mechanical design:

Housing: Glass fibre reinforced polyester resin. Version H with separate battery box at one small side of the housing.

Diffuser: Clear polycarbonate, frosted, detachable, silicone gasket.

Reflector: Sheet steel, painted white, detachable, carrying the encapsulated

LED-modules and protection cover.

Central locking system: Operated by a hexagonal box spanner 13mm.

Connection: Prepared for looping the mains cable at one end 4 x 1 - 4 mm². Terminal L1 + L1' + N + PE, up to 2.5 mm².

Cable entries: 2 entries M25 x 1.5 at the front side of the light fitting (2 cable glands, 1 with blanking plug).

Mounting: Side fixing brackets allow direct mounting on to walls or ceilings (Version without battery box). Mounting accessories see spare parts/ accessories.

Technical Data:

LED: Line modules ca. 6,500K, CRI > 80, service life L₈₀ > 100.000h at max. ambient temperature, L₉₀ > 95.000h at 25°C ambient temperature

ECG with emergency light electronic

Incorporated NiCd battery, electronic charger, short circuit protected battery and reverse battery protection

Electronic deep discharge protection: acc. to EN 61347-2-7

Re-charging time: 24h, acc. to EN 60598-2-22

Automatic monitoring: of the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire

Mode of operation:

maintained operation = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

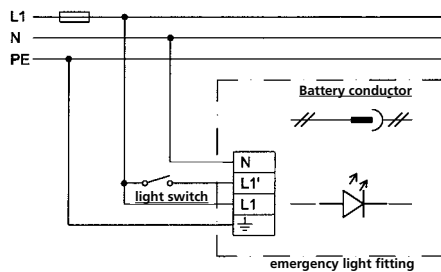
stand-by operation = switching on in case of mains failure.

Options:

- Emergency lighting unit with DALI interface for dimming and central monitoring, compatible with LIMAS Line PRO (DIMDI) Light Management System
- remote switch
- preparation for a 6-core looping at one end

Note:

This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

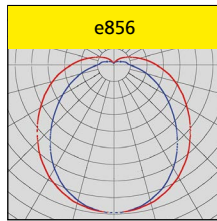


Starting:

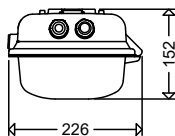
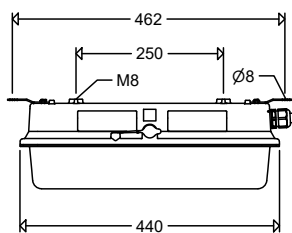
Connect battery conductor.

Out-of-operation: separate battery conductor.

Stand-by operation: Do not connect L1'.



e856F ... (without battery box)



Product highlights:

- extremely robust construction of housing and diffuser
- comfortable central locking mechanism for easy maintenance
- **innovative encapsulation** with high transmission rate
- homogeneous lighting distribution by frosted anti-glare modules-protecting the LEDs as well of ESD and mechanical damage. No individual light points visible, comfortable perception of light, brilliant glare limitation
- **high colour rendering index CRI > 80**, according to the workplace guide lines suitable for nearly all plant locations
- safety in case of an emergency, instant light with maximum light output
- operation in maintained, switched maintained or stand-by mode possible
- multifunctional LED with coded indication of the functions, states and potential faults of the electronic device and the battery
- automatic weekly function test
- automatic annual duration test
- manual actuation of duration test is possible
- easy battery replacement due to connector
- **sustainable**, control gear and reflector with LED-modules replaceable by qualified personnel on-site



Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.



Photo: BASF

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous flux [lm] (emergency)	Luminous efficacy [lm/W]	Suitable for pictogram	1h operation time	3h operation time	Ta max [°C]	Substitute for *	Weight [kg] (without packing material)
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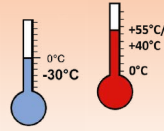
e856...



II 2 G Ex db eb [ib] mb
op is q IIC T4 Gb

II 2 D Ex op is tb
IIIC T80°C Db

IP66



EU-Type Examination Certificate:

IBExU 17 ATEX 1132

Other approvals:

IECEx IBE 17.0037

Type of protection: eb (increased safety)

Marking:

II 2 G Ex db eb [ib]mb op is q IIC T4 Gb
(Zone 1)

II 2 D Ex op is tb IIIC T80°C Db (Zone 21)

Rated voltage: 220-240V AC, 50/60Hz.

Permissible ambient temperature:

-30°C up to +55°C

Norminal range acc. to EN 60598-2-22

0°C up to 40° or 55°C (H-Versions).

Reduced emergency light duration if operated below 0°C.

85600 0017	e856F L05/1/1,6	6	510	510	85	•	•	•	55	1 x 8W	5,4
85600 0018	e856F L05/3/2,5	6	510	260	85	•	•	•	55	1 x 8W	5,4
85600 0003	e856F L10/1/1,6	11	1.060	560	96		•	•	40	2 x 8W	5,4
85600 0004	e856F L10/3/2,5	11	1.060	260	96		•	•	40	2 x 8W	5,4
85600 0001	e856F L20/1/1,6	19	2.050	560	108		•	•	40	2 x 18W	5,5
85600 0002	e856F L20/3/2,5	19	2.050	260	108		•	•	40	2 x 18W	5,6

for high temperatures up to +55°C

Design:

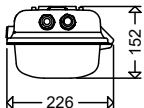
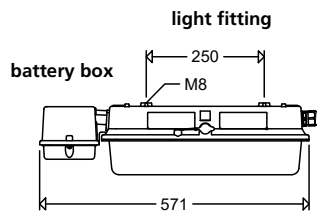
Same as standard version, but with separate battery box at one small side of the housing.

85600 0007	e856F L10/1/1,6 H	11	1.060	560	96		•	•	55	2 x 8W	6,3
85600 0008	e856F L10/3/2,5 H	11	1.060	260	96		•	•	55	2 x 8W	6,3
85600 0005	e856F L20/1/1,6 H	19	2.050	560	108		•	•	55	2 x 18W	6,4
85600 0006	e856F L20/3/2,5 H	19	2.050	260	108		•	•	55	2 x 18W	6,5

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



e856F ... H (with battery box)



Self-adhesive pictograms for identification of escape routes acc. to DIN EN ISO 7010 and ASR A1.3.



121/33 W

.../34 W

.../35 W

Viewing distance = 30m

Accessories / Spare Parts

Article No.	Type	
Spare batteries		
90222 9023	AKKU 8020	Spare battery 1.6Ah
90222 9024	AKKU 8021	Spare battery 2.5Ah
Spare diffuser		
85501 9001	ABD 855	cover, diffuser PC frosted, silicone seal, for e855 ..., e856 ...
Cable entries/Glands/Breather		
90117 9000	2537	ex-protected plastic cable gland M25 x 1,5
90118 9000	2538	ex-protected plastic plug M25 x 1,5
90119 9000	2539	ex-protected plastic plug M25 x 1,5 with blanking plug
90259 9000	KS25 EX	ex-breather M25 x 1,5
Mounting material		
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26 L P	2 wall mounting angles, hot galvanized steel
26000 0002	W 26/30 P	2 wall mounting angles 30°, hot galvanized steel
26000 0003	W 26/45 P	2 wall mounting angles 45°, hot galvanized steel
Self-adhesive pictograms		
12112 0006	121/33 W	emergency exit to the left
12112 0007	121/34 W	emergency exit to the right
12112 0008	121/35 W	emergency exit below

LED-Steep roof light fitting for Ex-Zone 1/21 Series e821...



Applications:

Hazardous areas of Zones 1 (gas) and 21 (dust), e.g. cleanrooms, paint shops and spray booths.

Design:

Housing: Sheet steel, powder coated in light grey (RAL 7035), silicone foam gasket.

Glass cover: Impact resistant safety glass pane, frameless / hinged.

Central locking system: Operated by a 5mm allen key, internal hinges on the opposite side.

Reflector: Hinged; white painted sheet steel; detachable, carrying the encapsulated LED-modules and glare limitation modules.

Connection: 3 poles up to 4mm².

Cable entries: 3 x M25 x 1,5 (2 glands - one of them is plugged and 1 screw plug).

Standard: Facing downwards or forwards.

Mechanical installation:

Mounting accessories see spare parts/accessories.

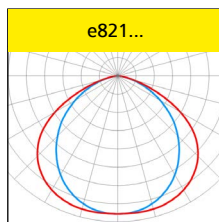
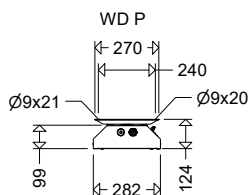
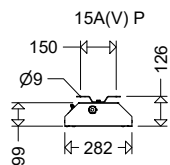
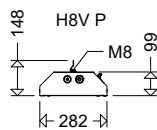
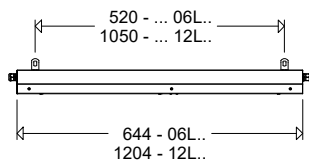
Technical Data:

LED: Line modules appr. 6,500K, CRI > 80, service life L₈₀ > 100.000h at max. ambient temperature, L₉₀ > 80.000h at 25°C ambient temperature

ECG: 220-240V AC/DC, 0 or 50/60Hz, overvoltage, overload and short circuit protection

Note:

This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.



Options:

- 4,500K, light colour 845

- for connection to group or central battery (light fittings of version ZB only) or emergency mains respectively

- with monitoring module for monitoring the individual light fitting

- housing made from stainless steel, painted

- prepared for 5-core cable looping system

- with through wiring system

- Installation in thermally insulated ceilings (acc. to EN60598)

- for higher ambient temperatures up to +65°C depending on version

STAINLESS STEEL
corrosion resistant



Product highlights:

- extremely flat and robust design
- innovative LED encapsulation with high transmission rate
- perfect protection of the LED from mechanical or electrostatic damages with at the same time homogeneous illumination with glare limitation modules, no individual light points visible, comfortable perception of light, excellent glare limitation
- high colour rendering index CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- comfortable central locking system with internal hinges
- separate, frame for recessed installation or a swivel arm mounting system can easily be installed at a later stage, (frame for recessed installation not suitable for stainless steel version!)
- sustainable, control gear and reflector with LED-modules replaceable by qualified personnel on-site
- suitability for paint booths LABS-tested according to VDMA 24364-C2-L



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ta max [°C]	Substitute for *	Weight [kg] (without packing material)
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Looping the cable on one side:

All light fittings of series e821... have got 2 cable entries on one small side of the housing for cable looping instead of the through wiring system. (3-pole looping standard, 5-pole looping at additional cost)

e821...



II 2 G Ex eb mb
q IIC T4 Gb

II 2 D Ex tb
IIIC T80°C Db

IP65



EU-Type Examination Certificate:

IBExU 20 ATEX 1017

Other approvals:

IECEx IBE 19.0032

Ignition protection: eb

Marking:

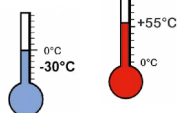
II 2 G Ex eb mb q IIC T4 Gb (Zone1)

II 2 D Ex tb IIIC T80°C Db (Zone 21)

Rated voltage: 220-240V AC/DC, 0 or 50/60Hz.

Permissible ambient temperature: -30°C up to +55°C

The values given are for versions with through wiring.



Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

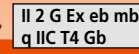
All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

82100 0001	e821 06L22	15	2.100	140	55	2 x 18W	7,7
82100 0002	e821 06L42	28	4.110	147	55	2 x 36W	7,9
82100 0003	e821 06L60	40	5.600	140	55	2 x 58W	7,9
82100 0050	e821 12L42	28	4.260	152	55	2 x 36W	13,6
82100 0051	e821 12L60	40	5.900	148	55	2 x 58W	14,0
82100 0052	e821 12L85	54	8.350	155	55	> 2 x 58W	14,0
82100 0053	e821 12L120	79	11.470	145	55	> 3 x 58W	14,0

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ta max [°C]	Substitute for *	Weight [kg] (without packing material)
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e821... DIMD



dimable via DALI interface

Design:

Same as standard version, but with DALI2-compatible ECG and 2 additional clamping points, marked with DA; the polarity does not matter:

Compatible with LIMAS Line BASIC/PRO Light Management System.

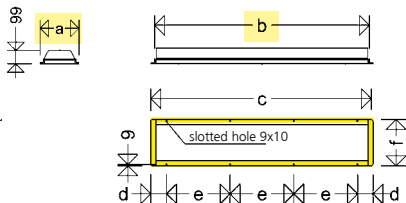
Note:

The conducting wires to the control input must be mains voltage stable and can be integrated in the connection cable.

82100 0005	e821 06L42 DIMD	28	4.110	147	55	2 x 36W	7,9
82100 0006	e821 06L60 DIMD	40	5.600	140	55	2 x 58W	7,9
82100 0054	e821 12L42 DIMD	28	4.260	152	55	2 x 36W	13,6
82100 0055	e821 12L60 DIMD	40	5.900	148	55	2 x 58W	14,0
82100 0056	e821 12L85 DIMD	54	8.350	155	55	> 2 x 58W	14,0
82100 0057	e821 12L120 DIMD	79	11.470	145	55	> 3 x 58W	14,0

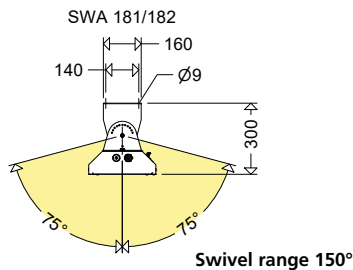
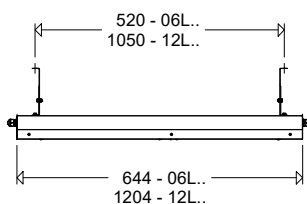
* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Installation dimensions



Type	a	b	c	d	e	f
EB 82. 06L	302	660	710	55	300	348
EB 82. 12L	302	1224	1270	125	340	348

Attention: When planning the opening for recess installation please allow additional clearance for the cable glands.



Further accessories as well as carrier rail systems and through wiring systems are available.

Frame for Recessed Installation

retrofit possible!

Light fittings of series e821... can be fitted with a surrounding angled frame for ceiling and wall installation (also retrofitted, except for stainless steel versions).

Mounting by means of M5 bolts to the long sides of the housing (see drawing).

Article No.	Type	
18091 0020	EB 82. 06L	frame for narrow housing, e821 06L, nD822 06L
18091 0021	EB 82. 12L	frame for narrow housing, e821 12L, nD822 12L

Swivel Arm Mounting System

retrofit possible!

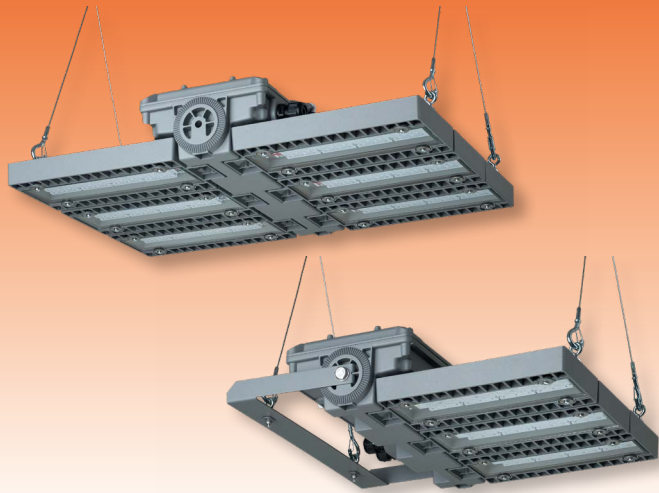
Light fittings of series e821... can be equipped with a swivel arm mounting system at any time. The swivel arms are fixed to the suspen-

sion points at the upper side of the housing. Swivel range: $\pm 75^\circ$ (see dimensions in diagram).

Article No.	Type	
18092 0001	SWA 181/182 P	for all wattages consisting of: 2 swivel arms with bolts M8

Accessories / Spare Parts

Article No.	Type	
Spare glasses		
82101 9001	ABD 821 06	cover, spare safety glass clear, for 185 06 ..., e821 06 ..., nD822 06 ...
82101 9002	ABD 821 12	cover, spare safety glass clear, for 185 12 ..., e821 12 ..., nD822 12 ...
Cable entries/cable glands		
90117 9006	2537 G	ex-protected gland of size M25 x 1,5 with nut
90119 9001	2539 G	ex-protected gland of size M25 x 1,5 with nut and plug
90118 9006	2538 G	ex-protected plug of size M25 x 1,5 with nut
Mounting material		
90001 0002	H8V P	2 suspension eyes, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
26000 0011	WD P	2 wall/ceiling angle, painted steel
26000 0005	WD 45 P	2 wall/ceiling angle 45°, painted steel



ExSTREAM

LED High Bay Fitting for Ex-Zone 1/2/1

Series e8825...

Applications:

Hazardous areas of Zones 1 (gas) and 21 (dust), in production, assembly and storage halls, workshops, the chemical - petrochemical and pharmaceutical industries, mills, paper mills, etc.

Design:

Available in 2 versions:

With three or six LED modules.

Housing: Die-cast aluminum, multi-part, thermally separated, powder-coated DB702 (mica-iron paint, grey). **LED housing** with LED modules, optics and

safety glass. **Device housing** with built-in control gear, wired ready for connection.

Front cover: Thermally resistant safety glass, impact resistance IK08.

Optics: Lens optics with narrow, narrow-wide or wide beam light distribution, Multi-Layer technology.

Connection: 5 poles, max. clamping range 4mm².

Cable entries: 2 x M25 x 1,5 (2 glands - one of them is plugged)

Mounting: see accessories (4 eyelets included)

Technical Data:

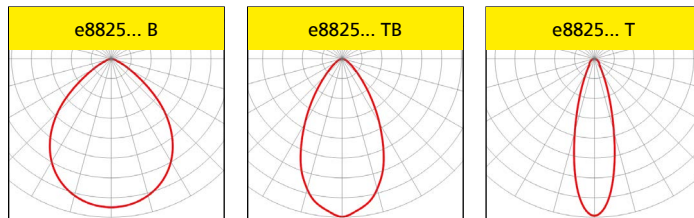
LED-module: approx. 5,500K (TB- and B-optics) or approx. 6,500K (T-optics), CRI > 80, service life L₈₀ > 100.000h at max. ambient temperature, L₉₀ > 90.000h at 25°C ambient temperature

ECG: 220 - 240V AC/DC, 0 or 50/60Hz, overvoltage, overload and short circuit protection.

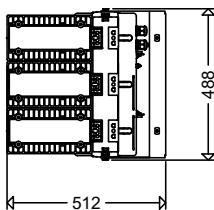
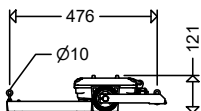
Ambient temperature: -30°C up to +40°C/+55°C (see item tables.)

Options:

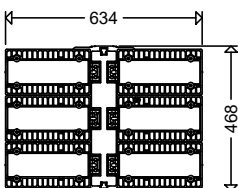
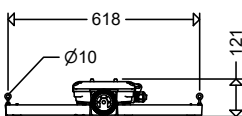
– for ambient temperatures down to -40°C



e8825/3...



e8825/6...



Product highlights:

- robust, modular design
- highly efficient due to the use of high quality MID-Power LEDs
- extremely long service life even at maximum permissible ambient temperature
- optimized thermal management
 - direct mounting of the LED modules to the housing
 - separate housings for ECG- and LED-modules
 - LED housing with integrated cooling fin structure
 - large cooling surface, excellent heat dissipation, very good convection
- colour rendering index CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- homogeneous and effective light distribution by specially calculated lens optics
- sustainable, control gear and LED-housing with LED-module replaceable by qualified personnel on-site



Photo: BASF

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ta max [°C]	Weight [kg] (without packing material)
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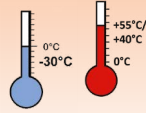
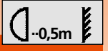
e8825...



II 2 G Ex eb
mb q IIC T4 Gb

II 2 D Ex tb IIIC
T100 °C Db

IP66



EU-Type Examination Certificate:

ATEX: IBEU 20 ATEX 1117

Other approvals:

IECEX: IECEX IBE 20.0028

UKCA: BAS21UKEX0580

Ignition protection: eb

Marking:

II 2 G Ex eb mb q IIC T4 Gb (Zone 1)

II 2 D Ex tb IIIC T100 °C Db (Zone 21)

Rated voltage: 220V up to 240V AC/DC,
0 or 50/60 Hz

Permissible ambient temperature:

-30°C up to see item tables

wide beam

88250 0001	e8825/3 L120B H55	87	11.850	136	55	8,8
88250 0004	e8825/3 L150B	125	15.800	126	40	8,8
88250 0007	e8825/6 L240B H55	174	23.700	136	55	13,5
88250 0010	e8825/6 L300B	250	31.600	126	40	13,5

narrow wide beam

88250 0002	e8825/3 L120TB H55	87	11.100	128	55	8,8
88250 0005	e8825/3 L150TB	125	14.650	117	40	8,8
88250 0008	e8825/6 L240TB H55	174	22.200	128	55	13,5
88250 0011	e8825/6 L300TB	250	29.300	117	40	13,5

narrow beam

88250 0003	e8825/3 L120T H55	87	10.300	118	55	8,8
88250 0006	e8825/3 L150T	125	13.500	108	40	8,8
88250 0009	e8825/6 L240T H55	174	20.600	118	55	13,5
88250 0012	e8825/6 L300T	250	27.000	108	40	13,5

e8825... DIMD



II 2 G Ex eb
mb q IIC T4 Gb

II 2 D Ex tb IIIC
T100 °C Db

IP66



dimnable via DALI interface

Design:

Same as standard version, but with DALI2-compatible ECG and 2 additional clamping points, marked with DA; the polarity does not matter:

Compatible with LIMAS Line BASIC/PRO Light Management System.

Note:

The conducting wires to the control input must be mains voltage stable and can be integrated in the connection cable.

wide beam

88250 0100	e8825/3 L120B H55 DIMD	87	11.850	136	55	8,8
88250 0103	e8825/3 L150B DIMD	125	15.800	126	40	8,8
88250 0106	e8825/6 L240B H55 DIMD	174	23.700	136	55	13,5
88250 0109	e8825/6 L300B DIMD	250	31.600	126	40	13,5

narrow wide beam

88250 0101	e8825/3 L120TB H55 DIMD	87	11.100	128	55	8,8
88250 0104	e8825/3 L150TB DIMD	125	14.650	117	40	8,8
88250 0107	e8825/6 L240TB H55 DIMD	174	22.200	128	55	13,5
88250 0110	e8825/6 L300TB DIMD	250	29.300	117	40	13,5

narrow beam

88250 0102	e8825/3 L120T H55 DIMD	87	10.300	118	55	8,8
88250 0105	e8825/3 L150T DIMD	125	13.500	108	40	8,8
88250 0108	e8825/6 L240T H55 DIMD	174	20.600	118	55	13,5
88250 0111	e8825/6 L300T DIMD	250	27.000	108	40	13,5

Mounting material

Y-ropes 3301/3302 Y P

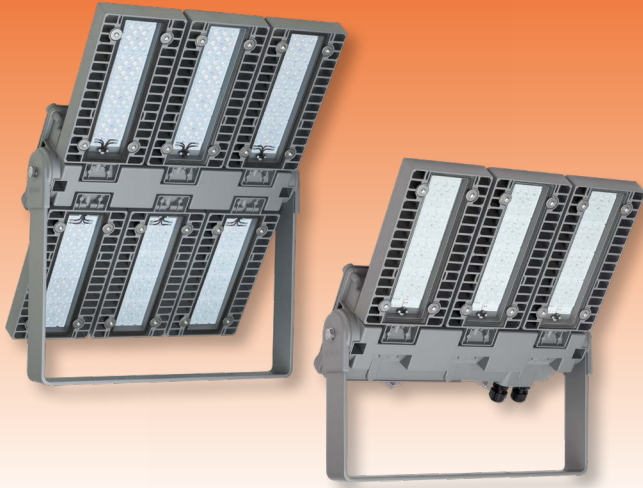


Ceiling brackets steel DW 8825 P



Accessories / Spare Parts

Article no.	Type	
Cable glands		
90117 9000	2537	ex-protected plastic cable gland M25 x 1,5
90119 9000	2539	ex-protected plastic cable gland M25 x 1,5 with plug
Mounting material		
33001 9004	3301/3302 Y P	1 pair of Y-ropes, (2-point-mounting) For indoor use only.
26000 0010	DW 8825 P	1 pair of ceiling brackets steel, powder-coated DB 702



ExSTREAM

LED-Floodlight for Ex-Zone 1/21

Series e8820...

Applications:

Hazardous areas of Zones 1 (gas) and 21 (dust). Oil and gas industry, onshore and offshore, chemical, petrochemical and pharmaceutical plants, refineries, tank farms, loading stations, etc.

Design:

Available in 2 versions:

With three or six LED modules.

Housing: Die-cast aluminum, multi-part, thermally separated, powder-coated DB702 (mica-iron paint, grey). **LED housing** with LED modules, optics and safety glass. **Device housing** with built-in control gear, wired ready for connection.

Front cover: Thermally resistant safety glass, impact resistance IK08.

Optics: Lens optics with narrow, narrow-wide or wide beam light distribution, Multi-Layer technology.

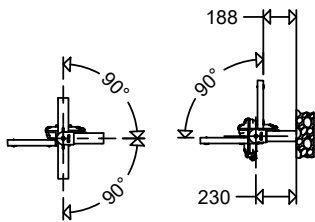
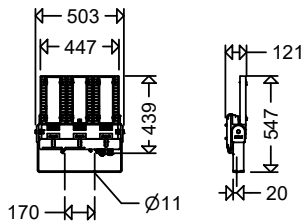
Connection: 5 poles, max. clamping range 4mm².

Cable entries: 2 x M25 x 1,5 (2 glands - one of them is plugged)

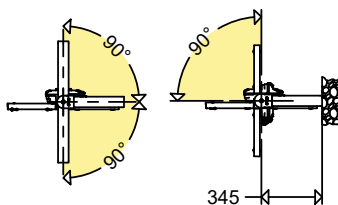
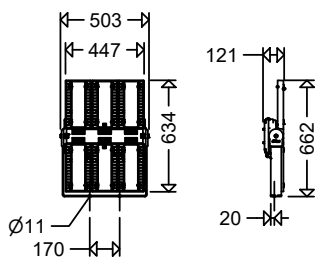
Mounting: Stainless steel bracket, adjustable in 5° steps around the longitudinal axis of the floodlight.

Standard Mounting: Light beam downwards or horizontally.

e8820/3...



e8820/6...



Technical Data:

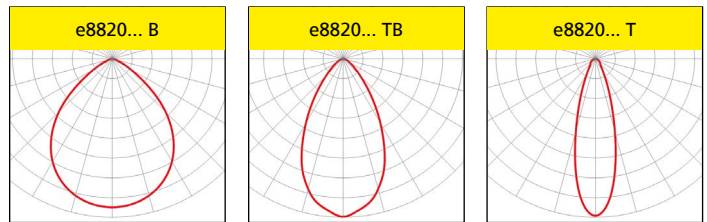
LED-module: approx. 5,500K (TB- and B-optics) or approx. 6,500K (T-optics), CRI > 80, service life L₈₀ > 100.000h at max. ambient temperature, L₉₀ > 90.000h at 25°C ambient temperature

ECG: 220 - 240V AC/DC, 0 or 50/60Hz, overvoltage, overload and short circuit protection.

Ambient temperature: -30°C up to +40°C/+55°C (see item tables.)

Options:

– for ambient temperatures down to -40°C  seawater-resistant version (SWP)



Product highlights:

- robust, modular design
- highly efficient due to the use of high quality MID-Power LEDs
- extremely long service life even at maximum permissible ambient temperature
- optimized thermal management
 - direct mounting of the LED modules to the aluminum housing
 - separate housings for ECG- and LED-modules
 - LED housing with integrated cooling fin structure
 - large cooling surface, excellent heat dissipation, very good convection
- colour rendering index CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- homogeneous and effective light distribution by specially calculated lens optics
- inclination angle adjustable in 5° steps
- sustainable, control gear and LED-housing with LED-module replaceable by qualified personnel on-site
- eco-friendly friendly with 0° installation, no light emission into the upper half-space, Dark-Sky requirements are fulfilled



Photo: BASF

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ta max [°C]	Weight [kg] (without packing material)
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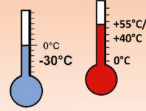
e8820...



II 2 G Ex eb
mb q IIC T4 Gb

II 2 D Ex tb IIIC
T100 °C Db

IP66



EU-Type Examination Certificate:

ATEX: IBEU 20 ATEX 1117

Other approvals:

IECEX: IIECEX IBE 20.0028

UKCA: BAS21UKEX0580

Ignition protection: eb

Marking:

II 2 G Ex eb mb q IIC T4 Gb (Zone 1)

II 2 D Ex tb IIIC T100 °C Db (Zone 21)

Rated voltage: 220V up to 240V AC/DC,
0 or 50/60 Hz

Permissible ambient temperature:

-30°C up to see item tables

wide beam

88200 0001	e8820/3 L120B H55	87	11.850	136	55	11,2
88200 0004	e8820/3 L150B	125	15.800	126	40	11,2
88200 0007	e8820/6 L240B H55	174	23.700	136	55	17,2
88200 0010	e8820/6 L300B	250	31.600	126	40	17,2

narrow wide beam

88200 0002	e8820/3 L120TB H55	87	11.100	128	55	11,2
88200 0005	e8820/3 L150TB	125	14.650	117	40	11,2
88200 0008	e8820/6 L240TB H55	174	22.200	128	55	17,2
88200 0011	e8820/6 L300TB	250	29.300	117	40	17,2

narrow beam

88200 0003	e8820/3 L120T H55	87	10.300	118	55	11,2
88200 0006	e8820/3 L150T	125	13.500	108	40	11,2
88200 0009	e8820/6 L240T H55	174	20.600	118	55	17,2
88200 0012	e8820/6 L300T	250	27.000	108	40	17,2

e8820... DIMD



II 2 G Ex eb
mb q IIC T4 Gb

II 2 D Ex tb IIIC
T100 °C Db

IP66



dimnable via DALI interface

Design:

Same as standard version, but with DALI2-compatible ECG and 2 additional clamping points, marked with DA; the polarity does not matter:

Compatible with LIMAS Line BASIC/PRO Light Management System.

Note:

The conducting wires to the control input must be mains voltage stable and can be integrated in the connection cable.

wide beam

88200 0100	e8820/3 L120B H55 DIMD	87	11.850	136	55	11,2
88200 0103	e8820/3 L150B DIMD	125	15.800	126	40	11,2
88200 0106	e8820/6 L240B H55 DIMD	174	23.700	136	55	17,2
88200 0109	e8820/6 L300B DIMD	250	31.600	126	40	17,2

narrow wide beam

88200 0101	e8820/3 L120TB H55 DIMD	87	11.100	128	55	11,2
88200 0104	e8820/3 L150TB DIMD	125	14.650	117	40	11,2
88200 0107	e8820/6 L240TB H55 DIMD	174	22.200	128	55	17,2
88200 0110	e8820/6 L300TB DIMD	250	29.300	117	40	17,2

narrow beam

88200 0102	e8820/3 L120T H55 DIMD	87	10.300	118	55	11,2
88200 0105	e8820/3 L150T DIMD	125	13.500	108	40	11,2
88200 0108	e8820/6 L240T H55 DIMD	174	20.600	118	55	17,2
88200 0111	e8820/6 L300T DIMD	250	27.000	108	40	17,2

Accessories / Spare Parts

Article no.	Type	
Cable glands		
90117 9000	2537	ex-protected plastic cable gland M25 x 1,5
90119 9000	2539	ex-protected plastic cable gland M25 x 1,5 with plug
Mounting material		
90270 0006	ROB 60/76 G2	Pipe clamp fastening for direct pole mounting; galvanised steel



ExGLOBE LED-Ceiling- or Wall-mounting light fitting for Ex-Zones 1/21 Series e9312

Applications:

Hazardous locations of zones 1 (gas) and 21 (dust) with low requirements for illuminance, strained field conditions or hard to reach areas.

Design:

Housing: Diecast aluminium, unpainted
Electrical kit: Diecast aluminium, with LED-Module and integrated ECG.
Cover: Polycarbonate, frosted.

Wire guard (SK): Galvanized steel.

Connection:

3 pole terminal, max. connection range 2,5mm².

Cable entry system:

2 x M25 x 1,5 (1 gland and 1 plug).

Mounting: 2 cast on brackets for wall or ceiling mounting

Operating position: Any method except.

Technical Data:

LED: approx. 6,500K, CRI typically 80, service life L₇₀ > 100.000h at max. ambient temperature

Rated voltage: 220-240V AC/DC, 0 or 50/60Hz

Admissible ambient temperature: -25°C up to +40°C

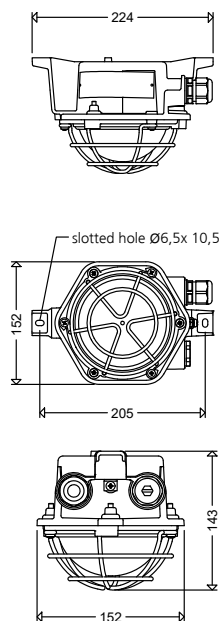
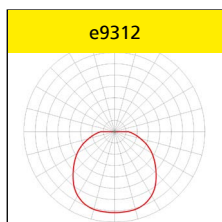
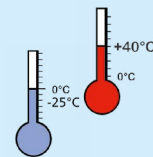
Options:

– 5-pole connection, max. connection range 2,5mm²

– with 2 cable glands M25 x 1,5mm²

Product highlights:

- robust, corrosion-resistant housing
- outer screws and bolts made of stainless steel
- shock resistant PC-cover
- additional safety due to robust wire guard (SK)
- **homogeneous illumination by using frosted cover**, no particular light points visible, comfortable perception of light, brilliant glare limitation
- **wide range of admissible ambient temperature -25°C up to +40°C**
- easy mounting with outer fixing points
- **sustainable**, control gear with LED-module replaceable by qualified personnel on-site



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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e9312



II 2G Ex eb
mb IIC T4 Gb

II 2D Ex tb
IIIC T80°C Db

IP66



EU-Type Examination Certificate:

IBExU 20 ATEX 1092

Other approvals:

IECEx IBE 20.0013

Marking:

II2G Ex eb mb IIC T4 Gb (Zone 1)

II2D Ex tb IIIC T80°C Db (Zone 21)

Ignition protection: „e“ (increased safety)

93120 0001	e9312F SK	11	600	55	1,3
93120 0002	e9312F	11	600	55	1,2

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Accessories / Spare Parts

Article no.	Type	
93101 9000	ABD 9309F	cover, frosted PC diffuser, silicone seal, for e9312 ...
93101 9001	SK 930 A	spare wire guard
90117 9000	2537	plastic gland M25x1,5
90118 9000	2538	plastic plug M25x1,5



ExSPECT LED Handlamp for Ex-Zones 1/21 Series e9310

Applications:

For use as work lighting in hazardous areas of Zones 1, 2 and 21, 22 which cannot be illuminated by any general lighting equipment.

Design:

Handle: Made of rubber (EPDM), with suspension eye, cable relief, cable entry

M20 x 1,5mm² with bend protection.

Electrical kit: Diecast aluminium, with LED-Module and integrated ECG.

Cover: Polycarbonate, frosted

Wire guard: Round steel, cage hook for suspension purpose.

Operating position: Any method except.

Technical Data:

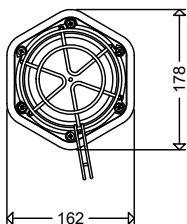
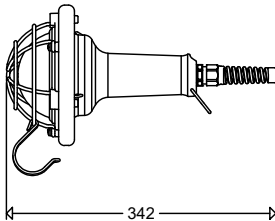
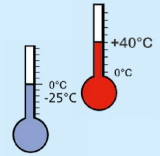
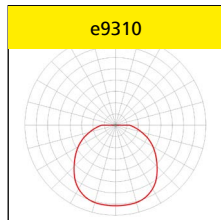
LED: approx. 6,500K, CRI typically 80, service life L₇₀ > 100.000h at max. ambient temperature

Rated voltage: 220 - 240V AC/DC, 0 or 50/60Hz

Admissible ambient temperature: -25°C up to +40°C

Product highlights:

- robust design for reliable and safe long-term use
- sturdy handhold
- shock resistant PC-cover
- additional safety due to robust wire guard
- high degree of protection IP66 (dust-proof and jet-proof)
- user-friendly and for various applications
- light weight
- suspension eye and cage hook
- homogeneous illumination by using frosted cover, no particular light points visible, comfortable perception of light, brilliant glare limitation
- ATEX-certified for gas and dust hazardous areas (Zones 1/21 and 2/22)
- ATEX-certified for explosion group II C and temperature class T4
- wide range of admissible ambient temperature from -25°C to +40°C
- sustainable, control gear with LED-module replaceable by qualified personnel on-site



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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e9310



II 2G Ex eb mb
op is IIC T4 Gb

II 2D Ex op is tb
IIIC T80°C Db

IP66



EU-Type Examination Certificate:

IBExU 19 ATEX 1134

Other approvals:

IECEx IBE 19.0028

Marking:

II 2G Ex eb mb op is IIC T4 Gb (Zone 1)

II 2D Ex op is tb IIIC T80°C Db (Zone 21)

Ignition protection: „e“ (increased safety)

93100 0001	e9310F	11	600	55	1,3
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Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Accessories / Spare Parts

Article no.	Type	
93101 9003	ABD 9308F	cover, frosted PC diffuser, for e9310 ...
93101 9004	SK 930 B	spare wire guard, with suspension hook
93101 9002	93KT	cable gland with bend protection



ExeLED 2 LED-Light Fitting for Ex-Zones 2/22 Series nD866...

Applications:

Hazardous locations of zones 2 (gas) and 22 (dust).

Design:

Housing: Glass fibre reinforced polyester resin.

Cover: Injected polycarbonate, frosted (F) or clear, silicone gasket.

Closure: Stainless steel clips (KE), two of them as safety clip (KES), to be opened with screwdriver only.

Reflector: Sheet Steel, painted, carrying the

LED-modules and all electrical components, clipped into the cover, suspendable.

Connection: 3 poles up to 2,5 mm².

Cable entries: 3 entries M25 x 1,5, (2 glands - one of them is plugged)

Standard: Facing downwards or forwards.

Mechanical installation:

Direct ceiling mounting is possible. Rubber washers are included

Further mounting options see accessories / spare parts.

Technical Data:

LED: Line modules 5,000K, CRI > 80, service life $L_{90} > 100.000h$ at max. ambient temperature, $L_{90} > 80.000h$ (06L..) at 25°C ambient temperature, $L_{90} > 90.000h$ (12L..) at 25°C ambient temperature

ECG: 220-240V AC/DC, 0 or 50/60Hz, overvoltage, overload and short circuit protection

Options:

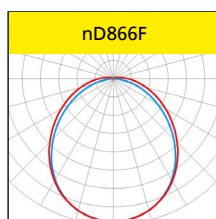
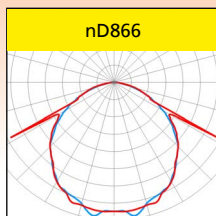
- for connection to group or central battery (light fittings of version ZB only) or emergency mains respectively
- for low ambient temperatures up to -40°C



- with monitoring module for monitoring the individual light fitting
- with through wiring system

Note:

This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.



Product highlights:

- Reflector and cover in sandwich design to protect the LED-Modules from mechanical or electrostatic damages due to accidental contact
- homogeneous illumination by using frosted diffusers (versions nD866F..) no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering index CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- FastFix mounting, system for variable mounting distances and easy installation (retaining clips HK865 P) without opening the fitting
- sustainable, control gear and reflector with LED-modules replaceable by qualified personnel on-site
- the light fittings are suitable for use in food areas (IFS/HACCP), see chapter 9.1 in the „Technical Supplement“



Looping the cable on one side:

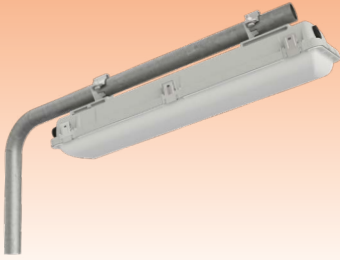
All light fittings of series nD866... have got 2 cable entries on one small side of the housing for cable looping instead of the through wiring system.

Properties, limitations and details for controlling LED-light fittings:

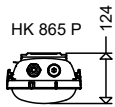
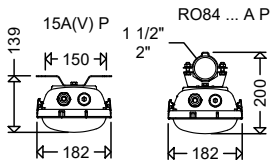
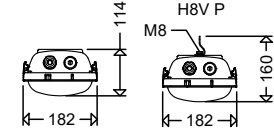
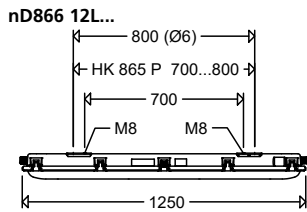
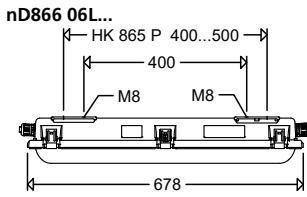
See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.



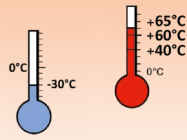


Pole mount with pipe clamps RO84P



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Cover frosted	Cover clear	Ta max [°C]	Substitute for *	Weight [kg] (without packingmaterial)
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nD866...



EU-Type Examination Certificate:

IBExU 16 ATEX B006

Other approvals:

IECx IBE 15.0015

Ignition protection: ec

Marking:

II 3 G Ex ec IIC T4 Gc (Zone 2)

II 3 D Ex tc IIIC T80°C Dc (Zone 22)

Rated voltage: 220-240V AC/DC, 0 or 50/60Hz.

Permissible ambient temperature:

-30°C see article table

86600 0050	nD866F 06L22	15	2.170	145	•		40	2 x 18W	3,3
86600 0051	nD866F 06L42	28	4.120	147	•		40	2 x 36W	3,4
86600 0052	nD866F 06L60	40	5.700	143	•		40	2 x 58W	3,4
86600 0002	nD866F 12L42	28	4.360	156	•		40	2 x 36W	5,4
86600 0003	nD866F 12L60	40	6.020	151	•		40	2 x 58W	5,4
86600 0004	nD866F 12L85	54	8.620	160	•		40	> 2 x 58W	5,5
86600 0012	nD866 12L42	28	4.590	164		•	40	2 x 36W	5,4
86600 0013	nD866 12L60	40	6.320	158		•	40	2 x 58W	5,4
86600 0014	nD866 12L85	54	9.010	167		•	40	> 2 x 58W	5,5

nD866... DIMD



dimable via DALI interface

Design:

Same as standard version, but with DALI2-compatible ECG and 2 additional clamping points, marked with DA, the polarity does not matter:

Compatible with LIMAS Line BASIC/PRO Light Management System.

Note:

The conducting wires to the control input must be mains voltage stable and can be integrated in the connection cable.

86600 0951	nD866F 06L42 DIMD	28	4.120	147	•		40	2 x 36W	3,4
86600 0953	nD866F 06L60 DIMD	40	5.700	143	•		40	2 x 58W	3,4
86600 0018	nD866F 12L42 DIMD	28	4.360	156	•		40	2 x 36W	5,4
86600 1903	nD866F 12L60 DIMD	40	6.020	151	•		40	2 x 58W	5,4
86600 0904	nD866F 12L85 DIMD	54	8.620	160	•		40	> 2 x 58W	5,5

nD866... H..



for high temperature ¹⁾

86600 0005	nD866F 12L42 H65	28	4.360	156	•		65	2 x 36W	5,4
86600 0008	nD866F 12L60 H60	40	6.020	151	•		60	2 x 58W	5,4
86600 0015	nD866 12L42 H65	28	4.590	164		•	65	2 x 36W	5,4
86600 0017	nD866 12L60 H60	40	6.320	158		•	60	2 x 58W	5,4

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

¹⁾ through-wiring or looping the cable is not permissible.

Versions up to Ta 55°C (H55) also possible with in/out wiring and through-wiring.

Fasteners

KE/KES VE10
KES P

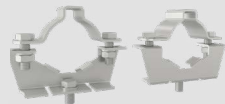


KE/KES G2 VE10
KES G2 P



Pipe clamps

2 pipe clamps 1 1/2",
stainless steel, with
support



2 pipe clamps 2",
stainless steel, with
support



Accessories / Spare Parts

Article No.	Type	
Spare covers		
86601 9014	ABD 8652F	cover, frosted PC diffuser, for e864 06 ..., e865 06 ..., nD866 06 ..., nD867 06 ...
86601 9001	ABD 8654F	cover, frosted PC diffuser, for e864 12 ..., e865 12..., nD866 12..., nD867 12 ...
86601 9000	ABD 8654	cover, diffuser PC clear, for e864 12 ..., e865 12 ..., nD866 12 ..., nD867 12 ...
Fasteners		
90055 9004	KE/KES VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.) see picture on the left, for nD866 12L.. until year of manufacture 2020
90055 9005	KES P	1 pair of safety clips stainless steel for nD866 12L.. until year of manufacture 2020
90055 9007	KE/KES G2 VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.) see picture on the left, for nD866 12L.. from year of manufacture 2020 and for nD866 06L..
90055 9006	KES G2 P	1 pair of safety clips stainless steel for nD866 12L.. from year of manufacture 2020 and for nD866 06L..
Glands/breather		
90117 9006	2537 G	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	2538 G	ex-protected plastic plug M25 x 1,5 with nut
90119 9001	2539 G	ex-protected plastic plug M25 x 1,5 with blanking plug and locknut
90259 9000	KS25 EX	ex-breather M25 x 1,5
Mounting material		
86501 9003	HK 865 P	2 retaining clips for variable mounting distances
90001 0002	H8V P	2 suspensions eyes with bolts, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support also for pole mounting
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support also for pole mounting
26000 0008	W 26 L P	2 wall mounting angles, hot galvanized steel
26000 0002	W 26/30 P	2 wall mounting angles 30°, hot galvanized steel
26000 0003	W 26/45 P	2 wall mounting angles 45°, hot galvanized steel

ExeLED 2 N

LED-Emergency Light Fitting for Ex-Zones 2/22

Series nD867...

Applications:

Hazardous locations of zones 2 (gas) and 22 (dust) for illumination of escape routes.

Design:

Housing: Glass fibre reinforced polyester resin. Version H with separate battery box at one small side of the housing.

Cover: Injected polycarbonate, frosted (F) or clear, silicone gasket.

Closure: Stainless steel clips (KE), two of them as safety clip (KES), to be opened with screwdriver only.

Reflector: Sheet Steel, painted, carrying the

LED-modules and all electrical components, clipped into the cover, suspendable.

Connection: 4 poles up to 2,5 mm².

Cable entries: 3 entries M25 x 1,5, (2 glands - one of them is plugged). Versions H with 2 x M25 x 1,5 at the front end of the light fitting.

Standard: Facing downwards or forwards.

Mechanical installation:

Direct ceiling mounting is possible. Rubber washers are included

Further mounting options see accessories / spare parts.

Technical Data:

LED: Line modules 5,000K, CRI > 80, service life L₈₀ > 100.000h at max. ambient temperature, L₉₀ > 90.000h (06L..) at 25°C ambient temperature, L₉₀ > 75.000h (12L..) at 25°C ambient temperature

Incorporated NiCd battery, electronic charger, short circuit protected battery and reverse battery protection

Electronic deep discharge protection: acc. to EN 61347-2-7

Re-charging time: 24h, acc. to EN 60598-2-22

Automatic monitoring: of the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire

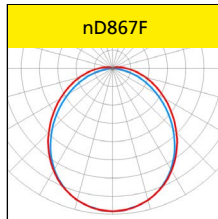
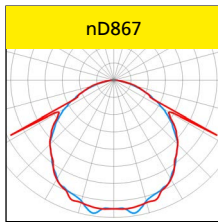
Mode of operation:

maintained operation = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

stand-by operation = switching on in case of mains failure.

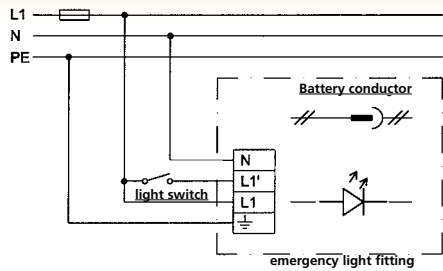
Options:

- Emergency lighting unit with DALI interface for dimming and central monitoring, compatible with LIMAS Line PRO (DIMDI) Light Management System
- remote switch
- with through wiring system



Note:

This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.



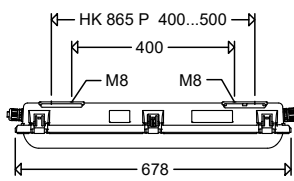
Starting:

Connect battery conductor.

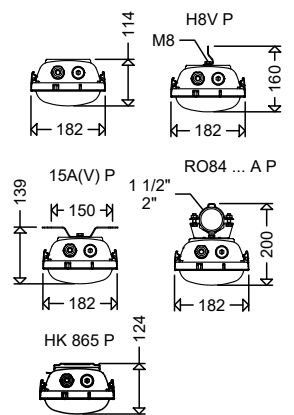
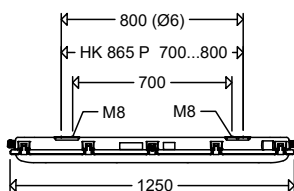
Out-of-operation: separate battery conductor.

Stand-by operation: Do not connect L1'.

nD867... 06L.. (without battery box)

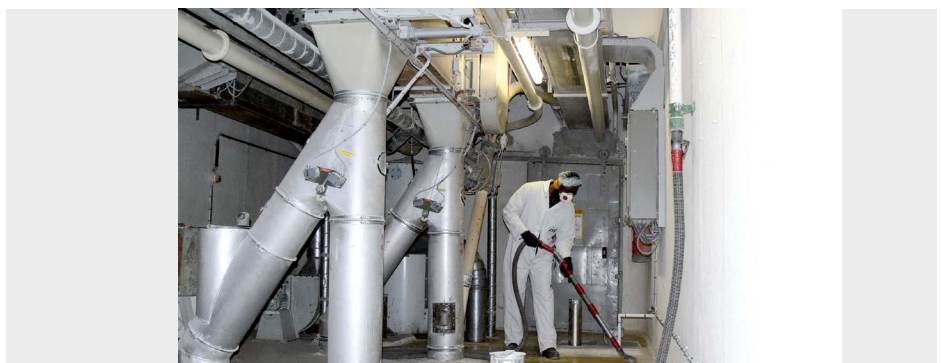


nD867... 12L.. (without battery box)



Product highlights:

- safety in case of an emergency, instant light with maximum light output
- operation in maintained, switched maintained or stand-by mode possible
- multifunctional LED with coded indication of the functions, states and potential faults of the electronic device and the battery
- automatic weekly function test
- automatic annual duration test
- manual actuation of duration test is possible
- easy battery replacement due to connector
- Reflector and cover in sandwich design to protect the LED-Modules from mechanical or electrostatic damages due to accidental contact
- homogeneous illumination by using frosted diffusers (versions nD866F..) no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering index CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- FastFix mounting, system for variable mounting distances and easy installation (retaining clips HK865 P) without opening the fitting
- sustainable, control gear and reflector with LED-modules replaceable by qualified personnel on-site



Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous flux [lm] (emergency)	Luminous efficacy [lm/W]	Cover frosted	Cover clear	1h operation time	3h operation time	Ta max [°C]	Substitute for *	Weight [kg] (without packing material)
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nD867...



II 3 G Ex ec IIC
T4 Gc

II 3 D Ex tc IIIC
T80°C Dc

IP66



EU-Type Examination Certificate:

IBExU 16 ATEX B006

Other approvals:

IECx IBE 15.0015

Ignition protection: ec

Marking:

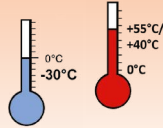
II 3 G Ex ec IIC T4 Gc (Zone 2)

II 3 D Ex tc IIIC T80°C Dc (Zone 22)

Rated voltage: 220-240V AC, 50/60Hz.

Permissible ambient temperature:

-30°C up to see table, reduced emergency light duration if operated below 0°C. For nD867 H nominal range acc. to EN60598-2-22, 0°C up to 45°C.



86700 0050	nD867F 06L22/1/4	16	2.170	650	136	•	•	•	•	40	2 x 18W	4,2
86700 0052	nD867F 06L42/1/4	29	4.360	750	150	•	•	•	•	40	2 x 36W	4,4
86700 0003	nD867F 12L42/1/4	29	4.360	750	150	•	•	•	•	40	2 x 36W	6,3
86700 0004	nD867F 12L60/1/4	41	6.020	750	147	•	•	•	•	40	2 x 58W	6,3
86700 0013	nD867 12L42/1/4	29	4.590	800	158	•	•	•	•	40	2 x 36W	6,3
86700 0014	nD867 12L60/1/4	41	6.320	800	155	•	•	•	•	40	2 x 58W	6,3
86700 0051	nD867F 06L22/3/4	16	2.170	650	136	•	•	•	•	40	2 x 18W	4,2
86700 0053	nD867F 06L42/3/4	29	4.360	750	150	•	•	•	•	40	2 x 36W	4,4
86700 0101	nD867F 12L42/3/4	29	4.360	750	150	•	•	•	•	40	2 x 36W	6,3
86700 0102	nD867F 12L60/3/4	41	6.020	750	147	•	•	•	•	40	2 x 58W	6,3
86700 0111	nD867 12L42/3/4	29	4.590	800	158	•	•	•	•	40	2 x 36W	6,3
86700 0112	nD867 12L60/3/4	41	6.320	800	155	•	•	•	•	40	2 x 58W	6,3

** versions L60 with through-wiring Tmax +35°C



nD867... H



II 3 G Ex ec IIC
T4 Gc

II 3 D Ex tc IIIC
T80°C Dc

IP66



for high temperatures up to +55°C

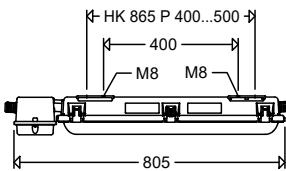
Design:

Same as standard version, but with separate battery box at one small side of the housing.

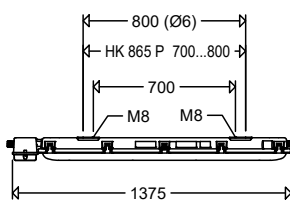
86700 0250	nD867F 06L22/1/4 H	16	2.170	650	136	•	•	•	•	55	2 x 18W	5,2
86700 0252	nD867F 06L42/1/4 H	29	4.360	750	150	•	•	•	•	55	2 x 36W	5,4
86700 0203	nD867F 12L42/1/4 H	29	4.360	750	150	•	•	•	•	55	2 x 36W	7,3
86700 0204	nD867F 12L60/1/4 H	41	6.020	750	147	•	•	•	•	55	2 x 58W	7,3
86700 0213	nD867 12L42/1/4 H	29	4.590	800	158	•	•	•	•	55	2 x 36W	7,3
86700 0214	nD867 12L60/1/4 H	41	6.320	800	155	•	•	•	•	55	2 x 58W	7,3
86700 0251	nD867F 06L22/3/4 H	16	2.170	650	136	•	•	•	•	55	2 x 18W	5,2
86700 0253	nD867F 06L42/3/4 H	29	4.360	750	150	•	•	•	•	55	2 x 36W	5,4
86700 0301	nD867F 12L42/3/4 H	29	4.360	750	150	•	•	•	•	55	2 x 36W	7,3
86700 0302	nD867F 12L60/3/4 H	41	6.020	750	147	•	•	•	•	55	2 x 58W	7,3
86700 0311	nD867 12L42/3/4 H	29	4.590	800	158	•	•	•	•	55	2 x 36W	7,3
86700 0312	nD867 12L60/3/4 H	41	6.320	800	155	•	•	•	•	55	2 x 58W	7,3

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

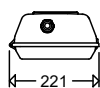
nD867 06L... H (with battery box)



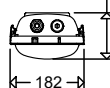
nD867 12L... H (with battery box)



battery box



light fitting



Accessories / Spare Parts

Article No.	Type	
Spare batteries		
90222 9031	AKKU NiCd 6V 4Ah	Spare battery 4.0Ah (replacement for article no. 90222 9029)
90222 9030	AKKU NiCd 6V 1,6Ah	Spare battery 1.6Ah - <i>on request</i> -
90222 9021	AKKU 2627 4,0Ah	Spare battery 4.0Ah (Types ...H)
90222 9023	AKKU 8020 1,6Ah	Spare battery 1.6Ah (Types ...H)
Spare covers		
86601 9014	ABD 8652F	cover, frosted PC diffuser, for e864 06 ..., e865 06 ..., nD866 06 ..., nD867 06 ...
86601 9001	ABD 8654F	cover, frosted PC diffuser, for e864 12 ..., e865 12..., nD866 12..., nD867 12 ...
86601 9000	ABD 8654	cover, diffuser PC clear, for e864 12 ..., e865 12 ..., nD866 12 ..., nD867 12 ...
Fasteners		
90055 9004	KE/KES VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.) see picture on the left, for nD867 12L.. until year of manufacture 2020
90055 9005	KES P	1 pair of safety clips stainless steel for nD867 12L.. until year of manufacture 2020
90055 9007	KE/KES G2 VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.) see picture on the left, for nD867 12L.. from year of manufacture 2020 and for e nD867 06L..
90055 9006	KES G2 P	1 pair of safety clips stainless steel for nD867 12L.. from year of manufacture 2020 and for nD867 06L..
Glands/breather		
90117 9006	2537 G	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	2538 G	ex-protected plastic plug M25 x 1,5 with nut
90119 9001	2539 G	ex-protected plastic plug M25 x 1,5 with blanking plug and locknut
90259 9000	KS25 EX	ex-breather M25 x 1,5
Mounting material		
86501 9003	HK 865 P	2 retaining clips for variable mounting distances
90001 0002	H8V P	2 suspensions eyes with bolts, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 ½", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26 L P	2 wall mounting angles, hot galvanized steel
26000 0002	W 26/30 P	2 wall mounting angles 30°, hot galvanized steel
26000 0003	W 26/45 P	2 wall mounting angles 45°, hot galvanized steel

Fasteners

KE/KES VE10
KES P



KE/KES G2 VE10
KES G2 P



Compact LED Emergency and Escape Sign Light Fitting for Ex-Zones 2/22

Series nD8611... LED



Applications:

Hazardous locations of zones 2 (gas) and 22 (dust) for illumination of escape routes and for identification of escape routes.

Design:

Housing: Die-cast aluminium, natural finish, all electrical components integrated in the housing, wired ready for connection.

Cover: Polycarbonate opalescent white, (W), foamed silicone gasket. (Pictograms –

if required – to be ordered separately, see accessories).

Connection terminal: 3 or 4 poles, clamping range max. 2,5mm².

Cable entries: 1 cable gland M20 x 1,5 on the front side.

Mounting: 2 outer fixing points.

Technical Data:

LED: Linear module 6.500K, CRI > 80, service life L₈₀ > 70.000h at max. ambient temperature

Versions with self-contained battery:

Built-in NiMH battery. A constant trickle charge to the battery ensures readiness of operation at all times.

Automatic monitoring the emergency light fitting acc. to EN 62034. Indication of the test results by 2-colour LED on the light fitting.

Electronic deep discharge protection acc. to EN 61347-2-7

Recharging time: 24 h, acc. to EN 60598-2-22

Modes of operation:

Stand-by operation: Emergency light switches on in case of mains failure

Maintained operation: Switching over to battery operation in case of mains failure

Options:

– same side in/out wiring (2 entries at one side M20 x 1,5)

– versions for higher ambient temperatures up to +60°C (without self-contained battery)



For series with self-contained battery:

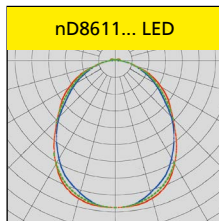
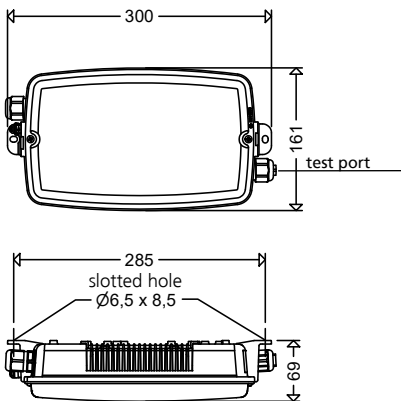
– Emergency lighting unit with DALI interface for central monitoring, compatible with LIMAS Line PRO (DI) Light Management System

For series in case of connection to a central power supply unit:

– with integrated LED supply- and monitoring module for monitoring individual light fittings connected to group- or central battery systems. We recommend Central Battery Systems from INOTEC.

Note:

This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

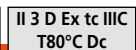
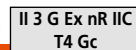


Product highlights:

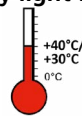
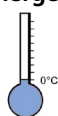
- safety in case of an emergency, instant light with maximum light output
- **stable luminous flux in emergency operation** independent from the ambient temperatures
- outstanding visibility of the indication sign due to a superb and even illumination of the pictogram
- robust light fitting for rough environment
- perfect by strained field conditions
- homogeneous illumination by using opal diffusers, comfortable perception of light
- fast mounting through external mounting grounding clips
- **sustainable**, control gear and LED-module replaceable by qualified personnel on-site

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous flux [lm] (emergency)	Luminous efficacy [lm/W]	Light fitting for pictogram	1h operation time	3h operation time	Weight [kg] (without packing material)
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nD8611 L02/. W



emergency light fitting with built-in battery



Ignition protection: nR

Explosion protection:

II 3 G Ex nR IIC T4 Gc Gc (Zone 2)

II 3 D Ex tc IIIC T80°C Dc (Zone 22)

Rated voltage: 220-240V AC, 50/60Hz

Ambient temperature:

0°C bis +30°C (maintained operation)

0°C bis +40°C (standby operation)

86111 0010	nD8611 L02/1 W	5	150	150	30	•	•		1,0
86111 0011	nD8611 L02/3 W	5	150	150	30	•		•	1,2

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous flux [lm] (emergency)	Luminous efficacy [lm/W]	Light fitting for pictogram	1h operation time	3h operation time	Weight [kg] (without packing material)
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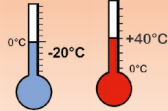
nD8611 L02 W



II 3 G Ex nR IIC T4 Gc

II 3 D Ex tc IIIC T80°C Dc

IP65



Ignition protection: nR
 Explosion protection:
 II 3 G Ex nR IIC T4 Gc Gc (Zone 2)
 II 3 D Ex tc IIIC T80°C Dc (Zone 22)

Rated voltage: 220-240V AC, 50/60Hz
 Ambient temperature:
 -20°C up to +40°C
 (further versions upon request).

86110 0010	nD8611 L02 W	4	150		38				0,8
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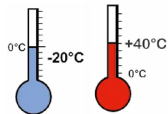
nD8611 L02 W ZB



II 3 G Ex nR IIC T4 Gc

II 3 D Ex tc IIIC T80°C Dc

IP65



Ignition protection: nR
 Explosion protection:
 II 3 G Ex nR IIC T4 Gc Gc (Zone 2)
 II 3 D Ex tc IIIC T80°C Dc (Zone 22)

Rated voltage: 220-240V AC/DC,
 0 or 50/60Hz
 Ambient temperature:
 -20°C up to +40°C
 (further versions upon request).

86111 0013	nD8611 L02 W ZB	4	150	150	38	•			0,8
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for connection to central power supply unit

Explosion protected Light Fittings



Type nD8611/... with pictogram 220/110/33

Self-adhesive pictogram
 green / transparent



220/110/32



.../33



220/110/34



.../35

For marking escape routes acc.to DIN EN ISO 7010 and ASR A1.3.

Viewing distance = 22m.

Accessories / Spare Parts

Article no.	Type	
Spare cover		
36004 9002	ABD 3611 W	cover, diffuser PC opal, for 3611 ..., nD8611...
Self adhesive legends for series 3611 and 8611		
12112 0100	220/110/32	Emergency exit upstairs
12112 0101	220/110/33	Emergency exit to the left
12112 0102	220/110/34	Emergency exit to the right
12112 0103	220/110/35	Emergency exit below
Cable entries		
90120 9008	2531 G	ex-protected cable gland M20x1,5 with nut
90122 9001	2533 G	ex-protected cable gland M20x1,5 with plug and with nut
Spare-batteries		
90222 9026	Akku 8620	Spare-battery 1h
90222 9027	Akku 8621	Spare-battery 3h

LED-Steep roof light fitting for Ex-Zone 2/22 Series nD822...



Applications:

Hazardous areas of Zones 2 (gas) and 22 (dust), e.g. cleanrooms, paint shops and spray booths.

Design:

Housing: Sheet steel, powder coated in light grey (RAL 7035), silicone foam gasket.

Glass cover: Impact resistant safety glass pane, frameless / hinged.

Central locking system: Operated by a 5mm allen key, internal hinges on the opposite side.

Reflector: Hinged; white painted sheet steel; detachable, carrying LED-modules and glare limitation modules.

Connection: 3 poles up to 2,5mm².

Cable entries: 3 entries M25 x 1,5, (2 glands - one of them is plugged)

Standard: Facing downwards or forwards.

Mechanical installation:

Mounting accessories see spare parts/ accessories.

Technical Data:

LED: Line modules appr. 5,000K, CRI > 80, service life L₈₀ > 100.000h at max. ambient temperature, L₉₀ > 75.000h at 25°C ambient temperature

ECG: 220-240V AC/DC, 0 or 50/60Hz, overvoltage, overload and short circuit protection

Options:

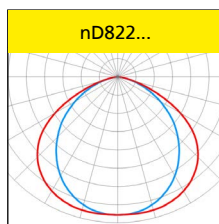
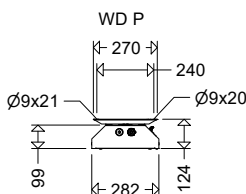
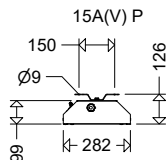
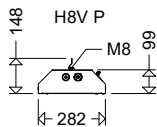
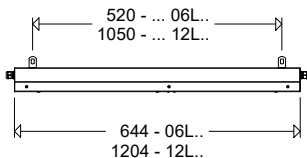
- for connection to group or central battery (light fittings of version ZB only) or emergency mains respectively
- with monitoring module for monitoring the individual light fitting
- Control gear with dimming function via DALI2-compatible interface, suitable for the LIMAS Line BASIC/PRO Light Management System (DIMD)

- housing made from stainless steel, painted
- prepared for 5-core cable looping system
- with through wiring system
- Installation in thermally insulated ceilings (acc. to EN60598)

STAINLESS STEEL
corrosion resistant

Note:

This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.



Product highlights:

- extremely flat and robust design
- perfect protection of the LED from mechanical or electrostatic damages with at the same time homogeneous illumination with glare limitation modules, no individual light points visible, comfortable perception of light, excellent glare limitation
- high colour rendering index CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- comfortable central locking system with internal hinges
- separate, frame for recessed installation or a swivel arm mounting system can easily be installed at a later stage, (frame for recessed installation not suitable for stainless steel version!)
- sustainable, control gear and reflector with LED-modules replaceable by qualified personnel on-site
- suitability for paint booths LABS-tested according to VDMA 24364-C2-L



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ta max [°C]	Substitute for *	Weight [kg] (without packing material)
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Looping the cable on one side:

All light fittings of series nD822... have got 2 cable entries on one small side of the housing for cable looping instead of the through wiring system. (3-pole looping standard, 5-pole looping at additional cost)

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

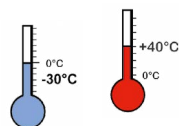
nD822...



II 3 G Ex ec
IIC T4 Gc

II 3 D Ex tc
IIIC T80°C Dc

IP65



Ignition protection: ec

Marking:

II 3 G Ex ec IIC T4 Gc (Zone 2)

II 3 D Ex tc IIIC T80°C Dc (Zone 22)

Rated voltage: 220-240V AC/DC, 0 or 50/60Hz.

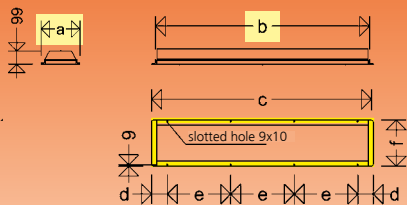
Permissible ambient temperature:

-30°C up to +40°C

82200 0001	nD822 06L22	15	2.100	140	40	2 x 18W	7,7
82200 0002	nD822 06L42	28	4.110	147	40	2 x 36W	7,9
82200 0003	nD822 06L60	40	5.600	140	40	2 x 58W	7,9
82200 0050	nD822 12L42	28	4.260	152	40	2 x 36W	13,6
82200 0051	nD822 12L60	40	5.900	148	40	2 x 58W	14,0
82200 0052	nD822 12L85	54	8.350	155	40	> 2 x 58W	14,0
82200 0053	nD822 12L120	79	11.470	145	40	>3 x 58W	14,0

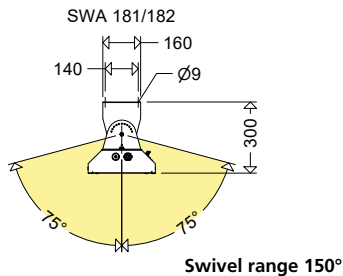
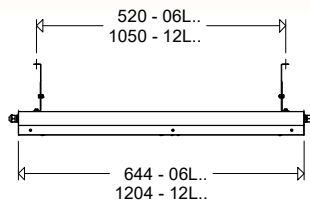
* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Installation dimensions



Type	a	b	c	d	e	f
EB 82. 06L	302	660	710	55	300	348
EB 82. 12L	302	1224	1270	125	340	348

Attention: When planning the opening for recess installation please allow additional clearance for the cable glands.



Swivel range 150°

Mounting material

Suspension brackets H8V P



Ceiling brackets 15A P



Wall/ceiling angles WD 45 P



Further accessories as well as carrier rail systems and through wiring systems are available.

Frame for Recessed Installation

retrofit possible!

Light fittings of series nD822... can be equipped (also retrofitted, except for stainless steel versions) with an all-round angle frame for ceiling and wall installation.

Mounting by means of M5 bolts to the long sides of the housing (see drawing).

Article No.	Type	
18091 0020	EB 82. 06L	frame for narrow housing, e821 06L, nD822 06L
18091 0021	EB 82. 12L	frame for narrow housing, e821 12L, nD822 12L

Swivel Arm Mounting System

retrofit possible!

Light fittings of series nD822... can be equipped with a swivel arm mounting system at any time. The swivel arms are fixed to the suspen-

sion points at the upper side of the housing. Swivel range: $\pm 75^\circ$ (see dimensions in diagram).

Article No.	Type	
18092 0001	SWA 181/182 P	for all wattages consisting of: 2 swivel arms with bolts M8



Explosion protected
Light Fittings

Accessories / Spare Parts

Article No.	Type	
Spare glasses		
82101 9001	ABD 821 06	cover, spare safety glass clear, for 185 06 ..., e821 06 ..., nD822 06 ...
82101 9002	ABD 821 12	cover, spare safety glass clear, for 185 12 ..., e821 12 ..., nD822 12 ...
Cable entries/cable glands		
90117 9006	2537 G	ex-protected gland of size M25 x 1,5 with nut
90119 9001	2539 G	ex-protected gland of size M25 x 1,5 with nut and plug
90118 9006	2538 G	ex-protected plug of size M25 x 1,5 with nut
Mounting material		
90001 0002	H8V P	2 suspension eyes, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
26000 0011	WD P	2 wall/ceiling angle, painted steel
26000 0005	WD 45 P	2 wall/ceiling angle 45°, painted steel



ExDUEVO LED High Bay Fittings for Ex-Zone 2/22 Series nD8301/nD8302...

Applications:

Hazardous locations, of Zones 2 (gas) and 22 (dust), in assembling- and production halls, warehouses, in industrial sectors, workshops, chemical factories etc.

Design:

Two versions are available: 1 (nD8301) or 2 (nD8302) LED segments.

Housing: Diecast aluminum, DB 702 (mica-iron paint).

LED-segment(s) with LED modules, optics (B- and TB-types) behind tempered safety glass (IK10).

ECG segment with integrated electronic control gear, prewired on terminals.

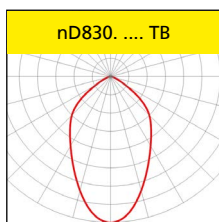
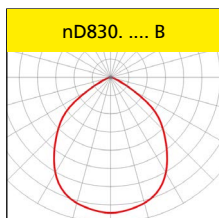
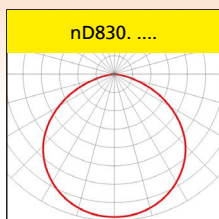
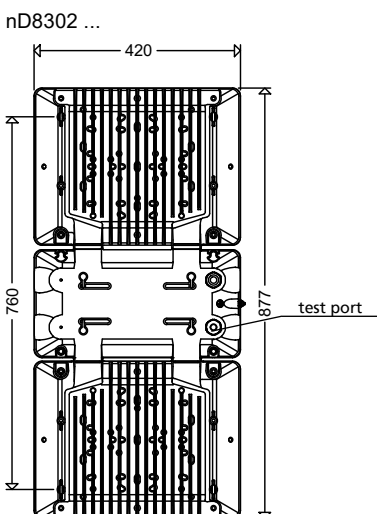
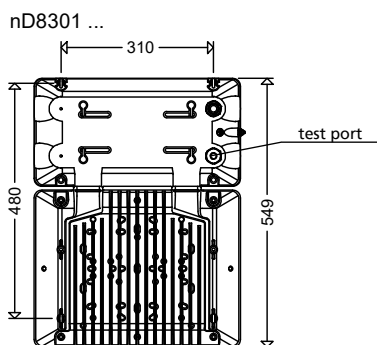
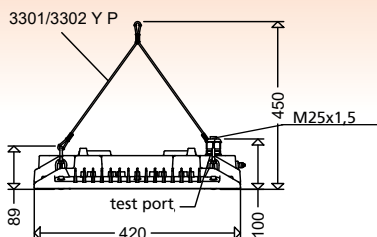
Light distribution: Without optic wide beam, with optic wide (B) or narrow-wide beam (TB).

Connection: 5 poles up to 2,5mm²

Entries: 1 gland M25 x 1,5

Mounting material: 4 eyelets M6 (included in delivery) or see accessories/spare parts

General Purpose: Beaming downwards (0°)



Technical Data:

LED-module: 4,000K, CRI > 80, service life $L_{70} > 100,000h$ at ambient temperature $\leq 50^\circ C$ or $L_{70} > 90,000h$ at ambient temperature $> 50^\circ C$, $L_{80} > 100,000h$ at $25^\circ C$ ambient temperature, $L_{80} > 60,000h$ at max. ambient temperature
ECG: 220 - 240V, 50/60Hz. Surge voltage resistance 4kV, overload and short circuit protection, Digital dimming with DALI interface (DIMD) compatible with LIMAS Line BASIC/PRO Light Management Systems.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): via 230V control input. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%).

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: $-20^\circ C$ up to $+40^\circ C$ / $+50^\circ C$ / $+60^\circ C$

Options:

- narrow beam version (T)
- Version with narrow oval optic (TO) for illumination of aisles in rack areas
- version with additional threads for wall mounting by means of swivel arm brackets (swivel range $0^\circ - 45^\circ$), not retrofittable
- for connection to group or central battery systems (ZB) or emergency mains respectively
- cable looping on one side (RR)

Product highlights:

- high efficient by use of top-quality mid-power LEDs
- extremely high service life even at the maximum permissible ambient temperature
- optimized thermal management due to direct mounting of the LED modules to the housing and separate housings for ECG- and LED-modules, huge heat sink with excellent heat dissipation
- high-quality ECG with overload and short circuit protection
- DALI interface (standard) for dimmed operation, compatible with LIMAS Line BASIC/PRO (DIMD) Light Management System
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping. No dark zones if any single LED would fail. The uniformity of the illumination is kept
- colour rendering index CRI > 80
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

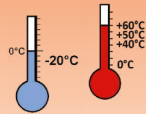


Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	T max [°C]	Wide beam	Narrow-wide beam	Substitute for *	Weight [kg] (without packing material)
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Ignition protection: nR
 Marking:
 II 3 G Ex nR IIC T4 Gc (Zone 2)
 II 3 D Ex tc IIIC T100°C Dc (Zone 22)

Rated voltage: 220V - 240V, 50/60Hz
 Permissible ambient temperature:
 -20°C up to +40°C / +50°C / +60°C

nD8301/nD8302...



II 3 G Ex nR IIC
T4 Gc

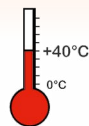
II 3 D Ex tc IIIC
T100°C Dc

IP65



... for ambient temperatures up to +40°C

1 LED segment



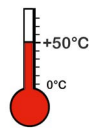
83010 0001	nD8301 L110	67	10.800	161	40	•		8,9
83010 0002	nD8301 L160	96	15.000	156	40	•		8,9
83010 0003	nD8301 L210	135	20.200	150	40	•		8,9
83010 0004	nD8301 L110B	67	10.800	161	40	•		9,2
83010 0005	nD8301 L160B	96	15.000	156	40	•		9,2
83010 0006	nD8301 L210B	135	20.200	150	40	•		9,2
83010 0007	nD8301 L110TB	67	10.800	161	40		•	9,2
83010 0008	nD8301 L160TB	96	15.000	156	40		•	9,2
83010 0009	nD8301 L210TB	135	20.200	150	40		•	9,2

2 LED segments

83020 0002	nD8302 L320	192	30.000	156	40	•		14,5
83020 0003	nD8302 L420	270	40.400	150	40	•		14,5
83020 0005	nD8302 L320B	192	30.000	156	40	•		14,6
83020 0006	nD8302 L420B	270	40.400	150	40	•		14,6
83020 0008	nD8302 L320TB	192	30.000	156	40		•	14,6
83020 0009	nD8302 L420TB	270	40.400	150	40		•	14,6

... for ambient temperatures up to +50°C

1 LED segment



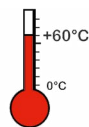
83010 0101	nD8301 L110 H50	67	10.800	161	50	•		8,9
83010 0102	nD8301 L160 H50	96	15.000	156	50	•		8,9
83010 0104	nD8301 L110B H50	67	10.800	161	50	•		9,2
83010 0105	nD8301 L160B H50	96	15.000	156	50	•		9,2
83010 0107	nD8301 L110TB H50	67	10.800	161	50		•	9,2
83010 0108	nD8301 L160TB H50	96	15.000	156	50		•	9,2

2 LED segments

83020 0101	nD8302 L220 H50	134	21.600	161	50	•		14,5
83020 0102	nD8302 L320 H50	192	30.000	156	50	•		14,5
83020 0104	nD8302 L220B H50	134	21.600	161	50	•		14,6
83020 0105	nD8302 L320B H50	192	30.000	156	50	•		14,6
83020 0107	nD8302 L220TB H50	134	21.600	161	50		•	14,6
83020 0108	nD8302 L320TB H50	192	30.000	156	50		•	14,6

... for ambient temperatures up to +60°C

1 LED segment



83010 0201	nD8301 L110 H60	67	10.800	161	60	•		8,9
83010 0202	nD8301 L160 H60	96	15.000	156	60	•		8,9
83010 0204	nD8301 L110B H60	67	10.800	161	60	•		9,2
83010 0207	nD8301 L110TB H60	67	10.800	161	60		•	9,2

2 LED segments

83020 0201	nD8302 L220 H60	134	21.600	161	60	•		14,5
83020 0202	nD8302 L320 H60	192	30.000	156	60	•		14,5
83020 0204	nD8302 L220B H60	134	21.600	161	60	•		14,6
83020 0207	nD8302 L220TB H60	134	21.600	161	60		•	14,6

Accessories / Spare Parts

Article no.	Type	
90117 9006	2537 G	ex-protected plastic cable gland M25x1,5 with nut
90119 9001	2539 G	ex-protected plastic cable gland M25x1,5 with nut and plug
33001 9004	3301/3302 Y P	1 pair of Y-ropes, (2-point-mounting)
33001 9002	3301/3302 DBF	1 pair of angle brackets for direct ceiling mounting



ExFOCO L LED-Floodlight/ plane surface floodlight for Ex-Zone 2/22 Series nD8700...

Applications:

Hazardous locations of Zones 2 (gas atmosphere) and 22 (dust atmosphere), indoor and outdoor areas, stockyards, e.g. construction sites, transport routes, pipe bridge, pedestrian areas etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated DB 702 (mica-iron paint, grey).

Upper part: With LED- and optics-modules,

Lower part: With electronic ballast, glass cover, cable entry with cable relief, retractable.

Glass: Flat safety glass pane, resistant to

temperature changes, impact resistant IK10, silicone gasket.

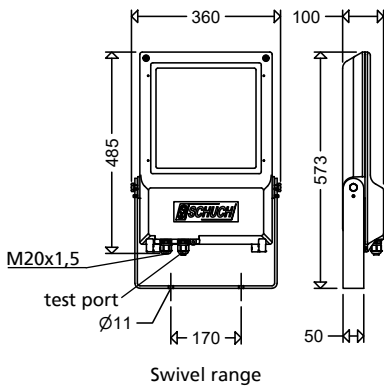
Light distribution: With optics narrow-wide (TB), narrow (T) or asymmetrical beam (A), without optics wide beam.

Connection terminal: 3-pole terminal max. clamping range 2,5mm².

Cable entry: 1 gland M20 x 1.5.

Mounting: Mounting bracket, swivel range 180°, for wall- or ceiling mounting or for direct pole mounting in conjunction with pipe clamps **ROB 60/76 G2** (see accessories).

Standard Mounting: Facing downwards or horizontal.



Electrical design:

LED module: 4,000K or 3.000K, $R_a > 70$, service life $L_{90} > 100,000h$ at max. ambient temperature, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%).

Digital dimming with DALI interface (DIMD) compatible with LIMAS Line BASIC/PRO Light Management Systems.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

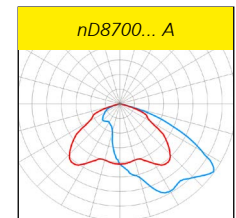
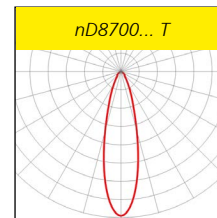
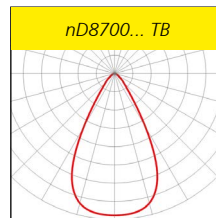
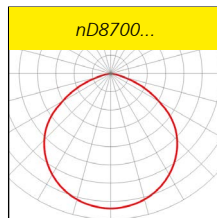
Ambient temperature: -30°C up to +40°C

Options:

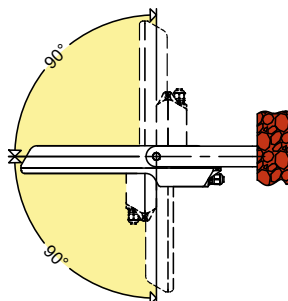
– seawater resistant version (SWP)

– for connection to group or central battery systems (ZB) or emergency mains respectively

– for higher ambient temperatures up to +55°C



Standard Mounting



Product highlights:

- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- optimal light distribution due to highly efficient optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components, ECG replaceable on-site
- eco-friendly, no light emission into the upper half-space, $ULOR=0$ (Plane surface floodlight)
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

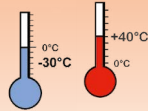
! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux ca. [lm]	Luminous efficacy [lm/W]	Ta max [°C]	Weight [kg] (without packing material)
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nD8700/ ...  II 3 G Ex nR IIC T4 Gc II 3 D Ex tc IIIC T100°C Dc IP66  



Ignition protection: nR
 Marking:
 II 3 G Ex nR IIC T4 Gc
 II 3 D Ex tc IIIC T100°C Dc

Rated voltage: 220V up to 240V AC, 50/60 Hz
 Permissible ambient temperature:
 -30°C up to +40°C

colour temperature 4.000K (light colour 740)

wide beam

87000 0007	nD8700 4803	106	16.790	158	40	9,7
87000 0001	nD8700 6403	140	21.940	157	40	9,7

narrow wide beam

87000 0008	nD8700 4803TB	106	16.790	158	40	9,7
87000 0002	nD8700 6403TB	140	21.940	157	40	9,7

narrow beam

87000 0014	nD8700 4803T	106	16.790	158	40	9,7
87000 0013	nD8700 6403T	140	21.940	157	40	9,7

asymmetrical beam (plane surface floodlight)

87000 0009	nD8700 4803A	106	15.200	143	40	9,7
87000 0003	nD8700 6403A	140	20.000	143	40	9,7

NEW

colour temperature 3.000K (light colour 730)

wide beam

87000 0032	nD8700 4803 730	106	15.950	150	40	9,7
87000 0036	nD8700 6403 730	140	20.840	149	40	9,7

narrow wide beam

87000 0033	nD8700 4803TB 730	106	15.950	150	40	9,7
87000 0037	nD8700 6403TB 730	140	20.840	149	40	9,7

narrow beam

87000 0034	nD8700 4803T 730	106	15.950	150	40	9,7
87000 0038	nD8700 6403T 730	140	20.840	149	40	9,7

asymmetrical beam (plane surface floodlight)

87000 0035	nD8700 4803A 730	106	14.290	135	40	9,7
87000 0039	nD8700 6403A 730	140	18.800	134	40	9,7



Accessories / Spare Parts

Article no.	Type	
Cable glands		
90120 9000	2531	ex-protected plastic cable gland M20 x 1,5
90122 9000	2533	ex-protected plastic cable gland M20 x 1,5 with plug
Mounting material		
90270 0006	ROB 60/76 G2	Pipe clamp fastening for direct pole mounting; galvanised steel



ExFOCO XL LED-Floodlight/ plane surface floodlight for Ex-Zone 2/22 Series nD8800...

Applications:

Hazardous locations of Zones 2 (gas) and 22 (dust), indoor and outdoor areas, stockyards, construction sites, transport routes, pipe bridge, pedestrian areas etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated DB 702 (mica-iron paint, grey).

Upper part: With LED- and optics-modules

Lower part: With electronic ballast, glass cover, cable entry with cable relief, retractable.

Glass: Flat safety glass pane, resistant to temperature changes, impact resistant IK09, silicone gasket.

Connection terminal: 3-pole terminal, max. clamping range 2,5mm².

Cable entry: 1 gland M25 x 1.5.

Mounting: Mounting bracket, swivel range 180°, for wall- or ceiling mounting or for direct pole mounting in conjunction with pipe clamps

ROB 60/76 G2 (see accessories).

Standard Mounting: Facing downwards or horizontal.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000$ h at max. ambient temperature, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%).

Digital dimming with DALI interface (DIMD) compatible with LIMAS Line BASIC/ PRO Light Management Systems.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

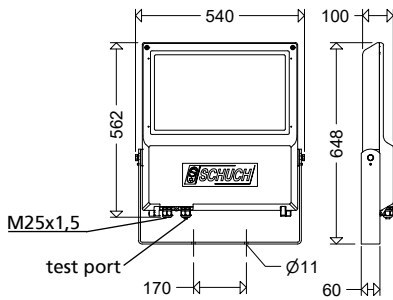
Ambient temperature: -30°C up to +40°C

Options:

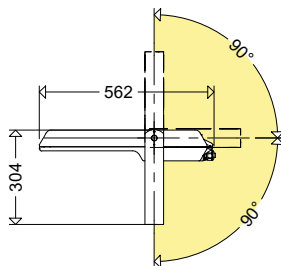
– seawater resistant version (SWP)

– for connection to group or central battery systems (ZB) or emergency mains respectively

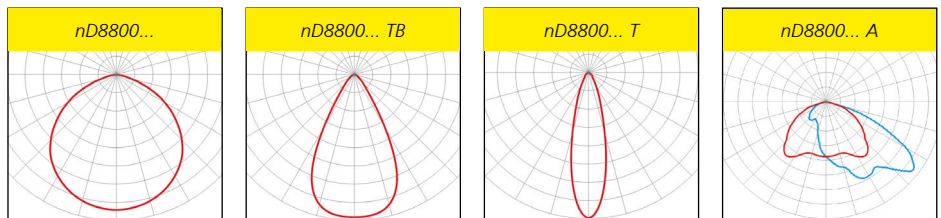
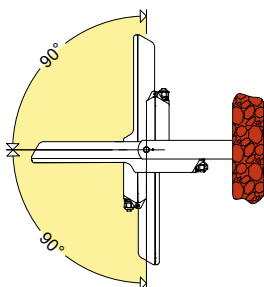
– for higher ambient temperatures up to +50°C



Swivel range



Standard Mounting



Product highlights:

- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- optimal light distribution due to highly efficient optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components, ECG replaceable on-site
- eco-friendly, no light emission into the upper half-space, $ULOR=0$ (Plane surface floodlight)
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

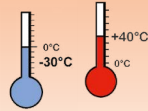
Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux ca. [lm]	Luminous efficacy [lm/W]	Ta max [°C]	Weight [kg] (without packing material)
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nD8800/ ...  II 3 G Ex nR IIC T4 Gc II 3 D Ex tc IIIC T100°C Dc IP66  



Ignition protection: nR
 Marking:
 II 3 G Ex nR IIC T4 Gc
 II 3 D Ex tc IIIC T100°C Dc

Rated voltage: 220V up to 240V AC, 50/60 Hz
 Permissible ambient temperature:
 (Zone 2) -30°C up to +40°C

colour temperature 4.000K (light colour 740)

wide beam

88000 0001	nD8800 6403	140	22.650	162	40	15,9
88000 0007	nD8800 12803	280	43.920	157	40	17,0

narrow wide beam

88000 0002	nD8800 6403TB	140	22.650	162	40	15,9
88000 0008	nD8800 12802TB	198	32.720	165	40	17,0

narrow beam

88000 0013	nD8800 6403T	140	22.650	162	40	15,9
88000 0014	nD8800 12802T	198	32.720	165	40	17,0

asymmetrical beam (plane surface floodlight)

88000 0003	nD8800 6403A	140	20.500	146	40	15,9
88000 0009	nD8800 12802A	198	29.300	148	40	17,0

NEW

colour temperature 3.000K (light colour 730)

wide beam

88000 0025	nD8800 6403 730	140	21.520	154	40	15,9
88000 0029	nD8800 12803 730	280	41.720	149	40	17,0

narrow wide beam

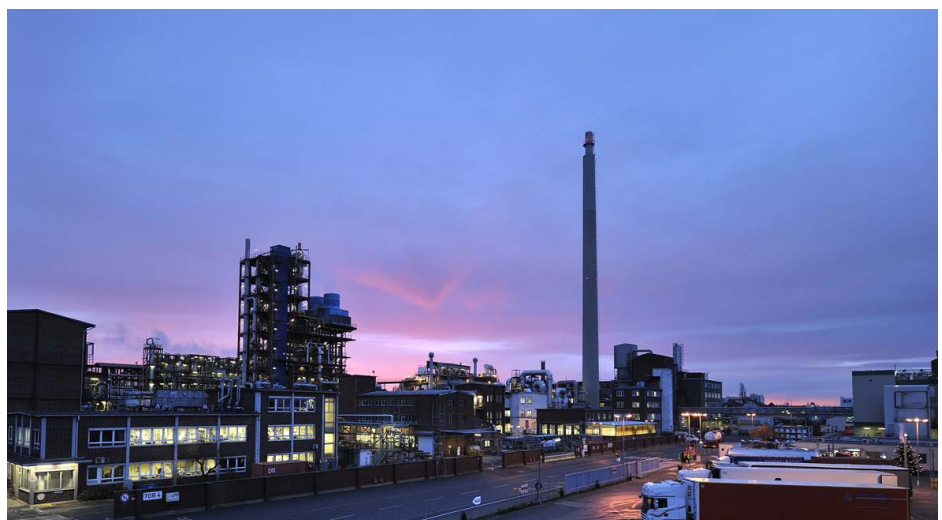
88000 0026	nD8800 6403TB 730	140	21.520	154	40	15,9
88000 0030	nD8800 12802TB 730	198	31.080	157	40	17,0

narrow beam

88000 0027	nD8800 6403T 730	140	21.520	154	40	15,9
88000 0031	nD8800 12802T 730	198	31.080	157	40	17,0

asymmetrical beam (plane surface floodlight)

88000 0028	nD8800 6403A 730	140	19.270	138	40	15,9
88000 0032	nD8800 12802A 730	198	27.540	139	40	17,0



Accessories / Spare Parts

Article no.	Type	
Cable glands		
90117 9000	2537	ex-protected plastic cable gland M25 x 1,5
90119 9000	2539	ex-protected plastic cable gland M25 x 1,5 with plug
Mounting material		
90270 0006	ROB 60/76 G2	Pipe clamp fastening for direct pole mounting; galvanised steel



Aluminium Carrier Rails for Continuous Row Installation Series TRS 2000... and AL...

Application:

For rows of light fittings suspended from the ceiling, allowing an easy installation and assembly.

Design:

Aluminium profiled carrier rails (AL / TRS 2000)

Lengths: 2, 3 or 5 m. Additional covering strip (TRS A) for series TRS.

Mounting accessories:

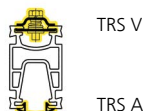
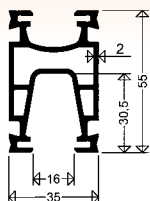
For each length of a light fitting only one suspension point is required.

Connection brackets (TRS V) - to be ordered separately - allow joining the individual rails up to any length wanted.

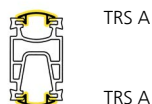
The carrier rails can either be mounted

directly to the ceiling by means of the ceiling brackets (183 A / TRS ED) or they can be suspended from the ceiling by means of the hook (183 H / TRS ER) in combination with the chain (KP 40) (max. distance of mounting rail elements 2.5m). Perlon pendulums are not suitable for this purpose.

2 or 3 devices (183 L / TRS EL) serve for mounting a light fitting to the rail. The suspension devices 183 A / TRS ED and 183 H / TRS ER as well as the devices 183 L / TRS EL are movable in the longitudinal direction of the rails.



TRS V



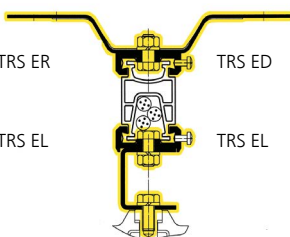
TRS A

TRS A

TRS A



TRS ER



TRS ED

TRS EL

TRS EL

TRS 2000...

aluminium carrier rails with high loading capacity

for series e840..., e864..., e865..., e821..., nD822...

Product highlights:

- Universal quick-action mounting system for explosion- and weather-proof light fittings
- easy to install (mount the suspension devices to the light fitting, then push the light fitting into the carrier rail profile)
- higher load capacity due to new profile design
- inserting the mains cable into the cable channel is possible
- a cover strip serves as a protection against dirt deposit

Article No.	Type	Product	Weight ca. [kg]
90260 0001	TRS 2000 2M	Alu-rail 2 m long	3,03
90260 0002	TRS 2000 3M	Alu-rail 3 m long	4,55
90260 0003	TRS 2000 5M	Alu-rail 5 m long	7,58
90265 0005	TRS 2000 A 1M	covering strip, 1 m long	0,04
90265 0006	TRS 2000 A 2M	covering strip, 2 m long	0,07

Mounting Devices

Article No.	Type	Product
90265 0004	TRS 2000 V	stainless steel device (profile) for rail connection
90265 0008	TRS 2000 ED	stainless steel ceiling bracket for mounting the rail
90022 0001	KP 40	chain 1 m long with 2 eyelets for fastening and length compensation
90265 0007	TRS 2000 ER	stainless steel ring nut for chain
90265 0009	TRS 2000 EL P	stainless steel mounting bracket

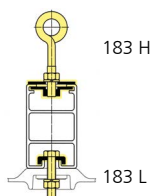
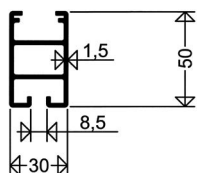
AL...

aluminium carrier rails for series nD866...

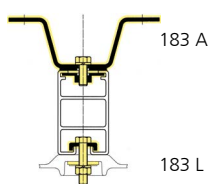
Article No.	Type	Product	Weight ca. [kg]
90005 0001	AL 2M	Alu-rail 2 m long	1,6
90005 0002	AL 3M	Alu-rail 3 m long	2,4

Mounting Devices

Article -No.	Type	Product
90265 0004	TRS V	stainless steel device for rail connection
90185 0001	183 A	stainless steel ceiling bracket for ceiling mounting of the carrier rail
90022 0001	KP 40	chain 1 m long with 2 eyelets for fastening and length compensation
90049 0001	183 H	stainless steel hook for chain pendulum
90050 0001	183 L	stainless steel mounting bracket



183 H



183 A

183 L

183 L

Through wiring Systems for Explosion-Protected Light Fittings

For all light fittings installed in a continuous row. Through wiring system with 2 multipole terminals which are fixed inside the light fitting.
(Since retrofitting the through wiring system on site is subject to special regulations in regard to hazardous areas, we do recommend a factory-made through-wiring system.)

Through wiring systems:
2.5mm² up to 16A
4.0mm² up to 20A
(depending on the permissible ambient temperature of the light fitting).

Note:

With the "variable cable entries" most of our explosion-protected fluorescent fittings are well suited for **looping the cable at one end** of the fitting. This allows a perfect adaptation to the local conditions and moreover in many cases this spares the classic through-wiring system.

Please contact us for details in regard to explosion-protected fittings with looping system

Factory-made through wiring system

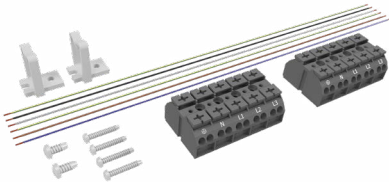
Our explosion-protected light fittings of Zone 1/21 and Zone 2/22 with factory-made through wiring systems will be delivered with the standard through wiring system 5x2,5mm² PVC of 6x2,5mm² PVC (emergency fittings Zone1/21). Fittings with such standard through wiring do have separate part numbers.

Example: Type e840..

Article No.	Type	Through wiring system)
84005 0001	e840 12L42	without through wiring system)
84005 1001	e840 12L42 DV	with classical through wiring system 5 x 2.5mm ² PVC

Through wiring systems for other cable cross sections (e.g. 4mm²) or number of poles (e.g. 3 x 2,5 mm²) are available on request.

Through-wiring system for retrofit



Article No.	Type	
for ex-proof LED-light fittings zone 1/21		
11501 0020	DV/NS ZO1/21 LED e865 06L	5 x 2,5 mm ² PVC, für e865 06 ...
11501 0019	DV/NS ZO1/21 LED e865 12L, e840 12L	5 x 2,5mm ² PVC, for e840... and e865 12 ...
for ex-proof LED-light fittings zone 2/22		
11891 0015	DV/NS ZO2/22 LED nD866 06L	5 x 2,5 mm ² PVC, für nD866 06 ...
11891 0014	DV/NS ZO2/22 LED nD866 12L	5 x 2,5mm ² PVC, nD866 12 ...

Through wiring retrofit sets for other series or other cable cross sections are also available.



Explosion-Protected Wall Sockets System SolConeX Series 4216...

Applications:

Hazardous areas of zones 1, 21 and 2, 22

Cable entry:

1 cable gland M25 x 1,5 and
1 plug M25 x 1,5 (at bottom)

Design:

Housing: Made from impact resistant plastic material with lock-up switch.
System SolConeX

Type	Ident.-No.	Dimens./mm height/length	Width resp. Ø
4216/306	8570/11-306	232	105
4216/506	8570/11-506	248	115

DB are standardized by Deutsche Bahn AG

4216/...



II 2 G Ex db eb
IIC T6 Gb

II 2 D Ex tb IIIC
T80°C Db

IP66



or voltages up to 415 V

EU-Type Examination Certificate:

PTB 03 ATEX 1227

Ignition protection:

e (increased safety)

Marking:

II 2 G Ex db eb IIC T6 Gb

II 2 D Ex tb IIIC T80°C Db

Temperature class: T6

Permissible ambient temperature:

-30°C bis +55°C

Article No.	Type	Rated-current	Voltage	Poles	Conn. terminals	Weight ca. [kg]
41060 0006	4216/306	16A	200-250V	2P + PE	up to 2 x 6,0 mm ²	1,12
41060 0008	4216/506	16A	200-415V	3P + N + PE	up to 2 x 6,0 mm ²	1,45



Explosion-Protected Plugs System SolConeX Series 4210...

Applications:

Hazardous areas of zones 1, 21 and 2, 22.

Cable entry:

8 to 20 mm cable

Design:

Housing: Made from impact resistant plastic material. System SolConeX

Type	Ident.-No.	Dimens./mm height/length	Width resp. Ø
4210/306	8570/12-306	176	76
4210/506	8570/12-506	176	92

Covering cap for plug available upon request.

DB are standardized by Deutsche Bahn AG

4210/...



II 2 G Ex db eb
IIC T6 Gb

II 2 D Ex tb IIIC
T80°C Db

IP66



for voltages up to 415V

EU-Type Examination Certificate:

PTB 03 ATEX 1227

Ignition protection:

e (increased safety)

Marking:

II 2 G Ex db eb IIC T6 Gb

II 2 D Ex tb IIIC T80°C Db

Temperature class: T6

Permissible ambient temperature:

-30°C bis +55°C

Article No.	Type	Rated current	Voltage	Pole	Conn. terminals	Weight ca. [kg]
41050 0006	4210/306	16A	200-250V	2P + PE	up to 2 x 6,0 mm ²	0,38
41050 0008	4210/506	16A	200-415V	3P + N + PE	up to 2 x 6,0 mm ²	0,50

Explosion-Protected Installation Switches Series 8040...



Applications:

For switching lighting installations in hazardous areas of Zones 1, 21 and 2, 22. Pay attention to the permissible switching capacities.

Design:

Housing and cover: Made from impact resistant glass fibre reinforced polyester resin. Rotary handle fluorescent. 90° switching.

Connection terminals:

stranded wire: 1,5 ... 2,5mm².
solid wire: 1,5 ... 4,0mm²

Cable entry:

1 cable gland M25 x 1,5 and
2 plugs M25 x 1,5 are part of the delivery.
2nd cable gland upon request.
Mounting: By means of 2 screws.

Electrical Data

Rated Voltage 690V AC, 220V DC
Switching capacities

AC-1	16A	690V
AC-15	16A	415V
AC-3	8A	500V
AC-3	4A	690V

DC-1	10A	24V
DC-1	6A	60V
DC-1	10A	110V ¹⁾
DC-1	10A	220V ²⁾

Number of poles: 2-pole

1) 2 contacts connected in series
2) 3 contacts connected in series

8040/.

for voltages up to 690 V



II 2 G Ex de IIC
T6 Gb

II 2 D Ex tb IIIC
T80°C Db

IP65



EU-Type Examination Certificate:

PTB 01 ATEX 1105

Marking:

II 2 G Ex de IIC T6 Gb
II 2 D Ex tb IIIC T80° Db

Ignition protection: e (increased safety)

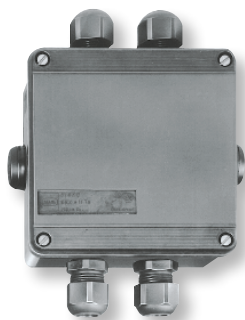
Rated voltage: 690V AC, 220V DC

Rated current: max. 16A

Permissible ambient temperature:
-20°C bis +40°C.

Article No.	Type	Switch version	Ident no.	Weight ca. [kg]
80300 0003	8040/A	ON-OFF 2 poles	8040/11-V30-33-B	0,60
80300 0004	8040/W	Pole changing switch	8040/11-V30-35-B	0,62

Explosion protected
Light Fittings



Explosion-Protected Junction Box Series 8118...

Applications:

For transmission and distribution of electrical energy in hazardous areas of Zones 1 and 2.

Design:

Housing: Made from impact resistant glass fibre reinforced polyester resin.

Connection terminals: 5 hood-type terminals (1 of them serves for earth connection) for a max. conductor size of

2x6.0 mm².

Cable entry:

8118/4:

4 cable glands M25 x 1,5 +2 plugs M25 x 1,5.

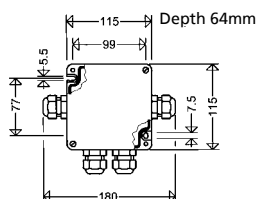
8118/6:

6 cable glands M25 x 1,5

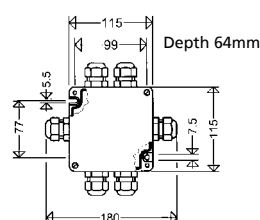
Mounting system:

See dimensional drawings.

8118/4



8118/6



8118/.

voltages up to 750V



II 2 G Ex e IIC
T5/T6 Gb

II 2 D Ex tb IIIC
T80°C/T95°C Db

IP66



EU-Type Examination Certificate:

PTB 99 ATEX 3103

Marking:

II 2 G Ex e IIC T5/T6 Gb
II 2 D Ex tb IIIC T80°C/T95°C Db

Ignition protection: e (increased safety)

Rated voltage: 750V AC

Permissible ambient temperature:

T6: -40°C bis +40°C

T5: - 40°C bis +55°C.

Rated current: max. 35A

Article No.	Type	Cable gland	Weight ca. [kg]
81180 0001	8118/4	4 x M25 x 1,5	0,57
81180 0002	8118/6	6 x M25 x 1,5	0,61



Waterproof Light Fittings

Quality knows no compromises

Waterproof light fittings have a wide scope of applications. Thus, a lighting system shall meet various requirements, from simple storage rooms to industrial applications with extreme ambient conditions and temperatures, mechanical and chemical impacts.

Requirements are as various as solutions which SCHUCH offers being an experienced specialist in this field. As a result, a very wide range of light fittings has been designed for special applications at workshops and in production areas.

Numerous excellent references in all industry branches witness SCHUCH's innovative strength, competence and reliability. Our customers appreciate the proverbial high quality of SCHUCH products for over 125 years.

Our customers can also rely on it with regard to all light fittings with the new LED technology. Quality knows no compromises.

FROM WATERPROOF PORCELAIN LIGHT FITTINGS TO WATERPROOF LED LIGHT FITTINGS

1895

Foundation of the company. Production of the first waterproof porcelain lamp holder for incandescent lamps. Production of first porcelain and hand light fittings with protective glass for damp locations, namely for breweries, leather and chemical industries.

1934

SCHUCH launches the first gas-tight pendant lamp ("completely hermetically sealed"). Further "special lights" and "special mountings" such as barrel illuminators, barn and cellar switches follow.

1949

Production of first waterproof light fittings without diffusers for fluorescent tubes.

1952/53

Production of industry's first waterproof light fitting made of fiberglass-reinforced polyester. Launching own production of "PREPREG" and in-house production of fiberglass-reinforced polyester housings.

1972

Start of production of legendary waterproof of light fittings series 161/162, which, in sub-sequent years, developed to the waterproof light fitting for severe industrial applications.

1975

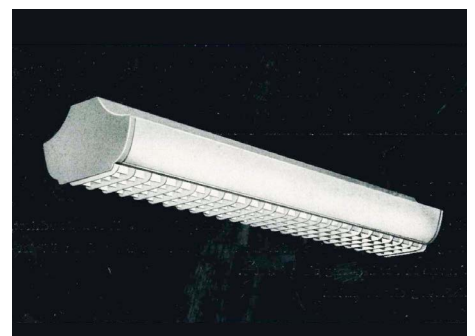
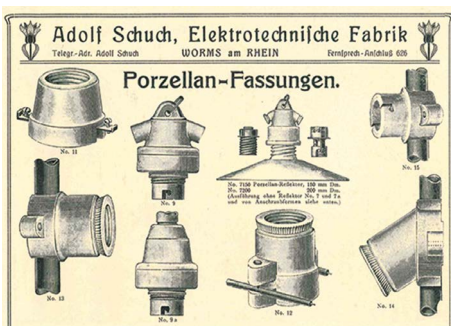
Foamed polyurethane gasket is used for the first time instead of widespread conventional rubber seals.

1995

The range of waterproof light fittings extends by including special industry solutions for severe applications in the industry and at workshops. In the following years, an extensive program developed out of this, which impressively documents the competence and know-how of SCHUCH.

2007

Industry's first waterproof light fitting for unprotected outdoor installation. A unique selling point that shows the high quality of SCHUCH lights.



Dustproof/Waterproof Light Fittings

Product	Series	Page
Lightmanagement		
LIMAS Air - smart radio based lighting control		70
LIMAS Line - smart wired lighting control		71
Light fittings with diffuser		
PROXIMA	161PX...	72-83
• with integrated motion detector	... SENS	75
• with smart LIMAS Air radio light control	... CS	76
• for high ambient temperatures	... H50	76
• for low ambient temperatures	... T40	76
• for wide temperature ranges	... T40 / H70	76
• for unprotected outdoor installation	... AUS	77
• for food industry areas	... IFS / LM	77-78
• highly efficient design	... HE	79
• for use in hazardous areas	... ER / HR	80
• variable setting of the luminous flux	... VARIO	81-83
Series 161/162...	161/162...	84-94
• with integrated motion detector	... SENS	86
• with narrow-wide optics	... TB	87
• for high ambient temperatures	... H50	87
• for low ambient temperatures	... T40	87
• for wide temperature ranges	... T40 / H70	87
• for unprotected outdoor installation	... AUS	88
• for food industry areas	... IFS / LM	88-89
• for use in hazardous areas	... ER / HR	90
• FastFix/FastConnect (mounting system)	... FF / FC	91
• variable setting of the luminous flux	... VARIO	92-94
Series 144...	144...	95-96
<i>Extremely robust Central Locking System</i>		
• for unprotected outdoor installation	... AUS	96
Series 163/164... Generation 2	163/164... G2	97-101
• with integrated motion detector	... SENS	99
• for high ambient temperatures	... H50	100
• for low ambient temperatures	... T40	100
• for food industry areas	... IFS	100
Series 161/162... RLED OV	161/162...	102
163/164... RLED OV	163/164...	
<i>for LED-Retrofit lamps</i>		
LUXANO 2 / VARIO	167... G2	103-108
• highly efficient design	... HE VARIO	104
• for unprotected outdoor installation	... AUS / VARIO	104
• for food industry areas	... IFS / VARIO	105
• with smart LIMAS Air radio light control	... HE CS	107
• for wide temperature ranges	... T40 / H50	107
• for agriculture and animal husbandry	... LW	107
... with DALI interface	... ER DIMD	108
Oval-shaped light fitting		
Series 3610...	3610...	109
Compact LED fittings		
Series 3611...	3611...	110
Series 164KL... Generation 2	164KL... G2	111
Series 130/131...	130/131...	112
Tubular light fittings		
PRIMO XR	107...	113-114
• for agriculture and animal husbandry	... LW	114
TUBEO	110...	115-116
• for high ambient temperatures	... H50	116
Sheet steel light fittings		
Series 190...	190...	117
Series 185...	185...	118-120
Vandal proof light fitting		
SEGURO	142...	121
Carrier rails	TRS / AL	122-123
Through wirings	DV	124

LED TECHNOLOGY

2007

The first waterproof LED light fittings (low power compact light fittings) are added to in the product range.

2014

With light fitting series 161 VARIO SCHUCH introduces industry's first waterproof light fitting with adjustable luminous flux. One light fitting can replace standard versions up to 2 x 58W.

2015/16

First LED light fitting series for a wide temperature range of -40°C to +65 °C, designed for applications in climatic zones with extreme temperature conditions and fluctuations.

2019-2021

SCHUH intensely investigates the influence of harmful gases on LED lights. This has resulted in the RESISTANT range of light fittings with the designations ER = increased protection HR = high protection XR = extremely tight and the extremely gas-tight PRIMO XR light fitting.

2022

A legend turns 50! With the PROXIMA 161PX... SCHUCH presents the next generation of the legendary 161... dustproof/waterproof luminaire series.

2023/2024

The new PROXIMA range and the highly successful LUXANO range are being extended to include a number of innovative variants. With LIMAS Air and LIMAS Line, smart lighting control systems are now available.





LIMAS Air - smart radio-based lighting control for moisture-proof luminaires (version ...CS)

With the radio-based LIMAS Air light management system, you can make your lighting system smart in no time at all - and without any additional installation work. No additional radio module is required to control moisture-proof luminaires. Everything you need for a networked lighting environment is already included in the luminaires (version ...CS). Based on CASAMBI® wireless technology and the Bluetooth wireless standard, the lighting system can be controlled reliably with low power consumption and a long range. The system is set up simply and intuitively using a smartphone or tablet with the free CASAMBI® app. The following sensors and actuators can be integrated and flexibly grouped.

For further details and properties, see the chapter on light management systems.

System components

LIMAS Air BM/DS IR LPH max. 14m



LIMAS Air BM/DS IR LPH max. 2,2m



LIMAS Air TAST INTER UP max. 4 KONT



LIMAS Air DALI PS/C



LIMAS Air TAST UP max. 4 KONT



RFL LIMAS Air HUB TRI



Type	Art.-No.	
LIMAS Air BM/DS IR LPH max. 14m	90547 9005	Motion and light sensor for a mounting height of max. 14m and a detection area of up to 28m diameter.
LIMAS Air BM/DS IR LPH max. 12m	90547 9006	Motion and light sensor for a mounting height of max. 12m and a detection area of max. 3m x 15m.
LIMAS Air BM/DS IR LPH max. 20m	90547 9007	Motion and light sensor for a mounting height of max. 20m and a detection area of max. 5m diameter.
LIMAS Air BM/DS IR LPH max. 2,2m	90547 9008	Motion and light sensor for a mounting height of max. 2.2m and a detection area of max. 5m diameter.
LIMAS Air TAST INTER UP max. 4 KONT	90547 9009	Push-button interface for connecting up to 4 analogue push-button contacts. Intended for mounting in a flush-mounted box.
LIMAS Air DALI PS/C	90547 9010	Radio module with DALI power supply and broadcast control of up to 60 ECs (total current 120mA). Power supply 230V.
LIMAS Air TAST UP max. 4 KONT	90547 9011	Battery-free 4-fold „EnOcean“ wireless pushbutton. When the button is pressed, energy is generated to supply the button electronics.
RFL LIMAS Air HUB TRI	90546 9013	Light management controller (2.4 GHz mesh network) with radio antenna and RFL base.



LIMAS Line BASIC/PRO - smart wired lighting control of DALI light fittings

With the LIMAS Line light management system, every DIMD light fitting from SCHUCH becomes a smart light fitting and brings you major economic and ecological benefits.

LIMAS Line is available in 2 versions:

LIMAS Line BASIC enables fully automated, dynamic light in conjunction with the corresponding sensors. Configuration is carried out using a smart end device (Android or iOS) via Bluetooth. This only requires a free app with which the room to be illuminated can be recreated and equipped and configured with luminaires, sensors and push-buttons.

LIMAS Line PRO offers extended options and additional functions. In addition to DIMD luminaires, all self-contained luminaires (MA-Z) in the SCHUCH portfolio can also be controlled and monitored. Configuration and control are carried out via PC without additional software - a browser is sufficient. The connection between the PC and LIMAS Line PRO can be realised either via an existing network or by establishing a peer-to-peer connection. An Internet connection is not required.

For further details and properties, see the chapter on lighting management systems.

Control components

LIMAS Line BASIC SCS



LIMAS Line PRO SCE



Type	Art.-No.	
LIMAS Line BASIC SCS	90545 0005	DALI2 controller for controlling up to 64 devices.
LIMAS Line PRO SCE	90545 0031	DALI2 controller for controlling up to 192 devices. Monitoring of single battery emergency lights possible.

System components

LIMAS Line IC



LIMAS Line DALI PS 240mA



LIMAS Line BM/DS PIR 4,0-14,0m R STE



LIMAS Line BM/DS HF 2,0-4,0m R STE



LIMAS Line MK4x10A



Type	Art.-No.	
LIMAS Line IC	90545 0015	DALI-2 input controller with 4 independent inputs for connection of floating contacts/buttons.
LIMAS Line DALI PS 240mA	90545 0016	DALI bus power supply with max. 240mA.
LIMAS Line BM/DS PIR 2,5-2,8m R STE	90545 0035	Infrared DALI2 motion detector including light sensor for mounting heights of 2.5-4m.
LIMAS Line BM/DS PIR 4,0-14,0m R STE	90545 0036	Infrared DALI2 motion detector including light sensor for heights up to 14m.
LIMAS Line BM/DS PIR 4,0-16,0m Q STE	90545 0037	Infrared DALI2 motion detector with light sensor for mounting heights up to 16m.
LIMAS Line BM/DS PIR 1,8-2,5m RH STE	90545 0038	Infrared DALI2 motion detector with light sensor for vertical wall mounting for height up to 2.5m.
LIMAS Line BM/DS PIR 2,5-5,0m Q STE	90545 0039	Infrared DALI2 motion detector with light sensor. For a mounting height of up to 5m and a maximum detection area of 6m x 23m.
LIMAS Line BM/DS HF 2,0-4,0m R STE	90545 0040	HF DALI2 motion detector with light sensor for a mounting height of up to 4.8m and a maximum diameter of the detection area of 8m.
LIMAS Line MK4x10A	90545 0041	Four potential-free relays, switchable with DALI. Suitable for signaling test and system states of single battery emergency lights.



A legend turns 50!
161 ... becomes 161 PX
PROXIMA – the next generation

PROXIMA

Dustproof/Waterproof LED Light Fitting with Diffuser Serie 161PX...

Applications:

In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, cold stores, low temperature stores, cooling chambers and walkable low temperature cabins in hotels, climate chambers, roofed outdoor areas, hard to reach areas with high downtime and maintenance costs etc. (For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Glass fibre reinforced polyester resin, foamed silicone gasket.

Diffuser: Injection-molded acrylic glass,

frosted for glare limitation.

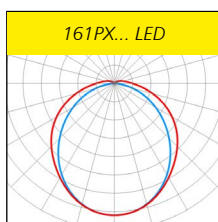
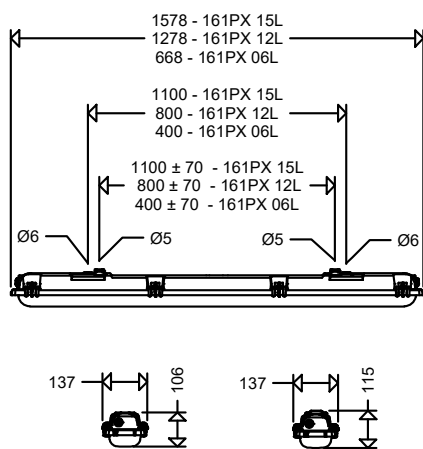
Closure: Three-part plastic safety clips (KKS) to ensure protection against accidental contact.

Reflector: Aluminium, painted, can be suspended or removed and carries the electrical components.

Connection: 3-pole

Cable entries: 3 plugs M20, loop in-out possible without further modification.

Mounting: 2 stainless steel retaining clips, 2 brackets for chain suspension, holes pre-pressed for direct fixing, sealing and pressure disks included in scope of deliver.



Technical data:

LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50.000h$ at 25°C ambient temperature, service life $L_{80} > 70.000h$ and $L_{70} > 100.000h$ at max. ambient temperature

ECG: 220-240V, 50/60Hz, overload and short-circuit protection

Ambient temperature: -20°C (-40°C for types ...T40) up to ..°C see article table

Options:

- 2,200K, 2,700K, 3,000K, 5,000K, 6,500K

- high colour rendering index $R_a > 90$

- signalization with **coloured LED**

- **amber-colored LEDs** (light colour

518) e. g. for insect-friendly lighting in outdoor areas etc.

- with narrow beam optics (TB)

- protection class II (SKII)

- vibration-resistant (RF)

- **Fast Connect (FC)** quick connector

- stainless steel clips (KE)

- through wiring up to 7x2.5 mm

- cable entries M25x1.5 mm²

Product highlights:

Now we have made the legendary 161 series even better and set a new standard:

161 PX PROXIMA - The next generation

- high-impact resistant housing, wall thickness 1.8 mm throughout
- diffuser with very high mechanical stability, wall thickness 2.0 mm throughout
- one housing width for all versions
- safety clips to ensure protection against contact
- FastFix quick mounting system with retaining clips made of stainless steel
- flexible mounting with movable retaining clips
- front-side in/out wiring (3-pole) possible as standard due to 2 entries on one side
- variable cable entry possible through additional entries on the top of the enclosure at the front or in the centre, centring holes available
- homogeneous illumination by using frosted diffusers
- highest efficiency due to use of top-quality components
- high colour rendering CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- with ∇ -sign, suitable for rooms with increased fire risk
- highest flexibility due to almost unlimited modification possibilities
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

Standard cable entries for looping the mains cable on one side (loop in/loop out):

We deliver the light fittings with 2 cable entries on one small side. This feature allows an optimal adjustment to all local conditions and it will consequently save the typical quite expensive through wiring system. (Surcharge for 5-pole version).



Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

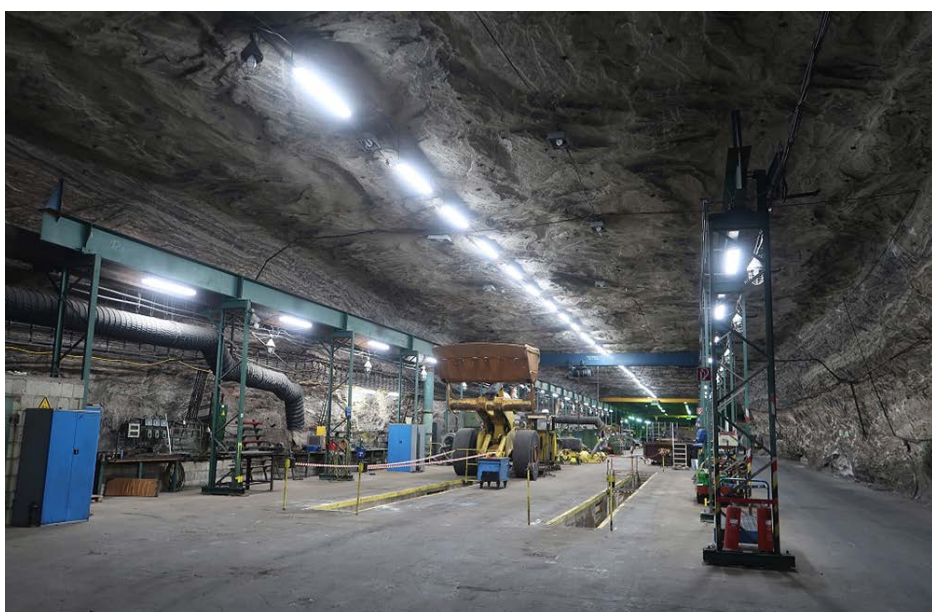
All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max.[°C]	Substitute for ca. *	Weight [kg] without packing material
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161PX...



16130 0001	161PX 06L12	1	10	1.340	134	40	1 x 18W	1,7
16130 0002	161PX 12L22	1	15	2.380	159	40	1 x 36W	2,8
16130 0003	161PX 15L34	1	21	3.430	163	40	1 x 58W	3,4
16130 0004	161PX 06L20	1	16	2.260	141	40	2 x 18W	1,7
16130 0005	161PX 12L42	1	27	4.220	156	40	2 x 36W	2,8
16130 0006	161PX 15L60	1	39	6.130	157	40	2 x 58W	3,4
16130 0007	161PX 12L60	1	39	5.900	151	40	2 x 58W	2,8
16130 0008	161PX 15L75	1	49	7.410	151	40	> 2 x 58W	3,4
16130 0009	161PX 12L120	1	77	11.470	149	35	2 x 80 bzw. 3 x 58W	3,1
16130 0010	161PX 15L150	1	93	14.250	153	35	4 x 58W	3,7
NEW 16130 0127	161PX 15L200	1	122	19.400	159	35	6 x 58W	4,2



Dustproof/Waterproof Light Fittings

161PX... DIMD



dimmable via DALI interface

Design:

Same as standard version, but with DALI2-ECG and 2 additional clamping points, marked with DA, the polarity does not matter. Dimming Dimming level 1-100%. Compatible with LIMAS Line Light Management System.

Note:

The conducting wires to the control input must be mains voltage stable and can be integrated in the connection cable.

16130 0011	161PX 06L12 DIMD	1	10	1.340	134	40	1 x 18W	1,7
16130 0012	161PX 12L22 DIMD	1	15	2.380	159	40	1 x 36W	2,8
16130 0013	161PX 15L34 DIMD	1	21	3.430	163	40	1 x 58W	3,4
16130 0014	161PX 06L20 DIMD	1	16	2.260	141	40	2 x 18W	1,7
16130 0015	161PX 12L42 DIMD	1	27	4.220	156	40	2 x 36W	2,8
16130 0016	161PX 15L60 DIMD	1	39	6.130	157	40	2 x 58W	3,4
16130 0017	161PX 12L60 DIMD	1	39	5.900	151	40	2 x 58W	2,8
16130 0018	161PX 15L75 DIMD	1	49	7.410	151	40	> 2 x 58W	3,4
16130 0019	161PX 12L120 DIMD	1	77	11.470	149	35	2 x 80 bzw. 3 x 58W	3,1
16130 0020	161PX 15L150 DIMD	1	77	14.250	185	35	4 x 58W	3,7
NEW 16130 0129	161PX 15L200 DIMD	1	122	19.400	159	35	6 x 58W	4,2

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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161PX... DIMC



dimnable via Corridor Mode

Applications:

Areas where light fittings are controlled via motion detector or door contact, e.g. storage areas, shelf aisles.
Areas with high energy-saving potential at times without presence of persons, e.g. car parks, warehouses, aisles in rack areas etc.

Design:

Same as standard version, but with dimmable ECG and additional clamping point, marked with 'L'.

Note:

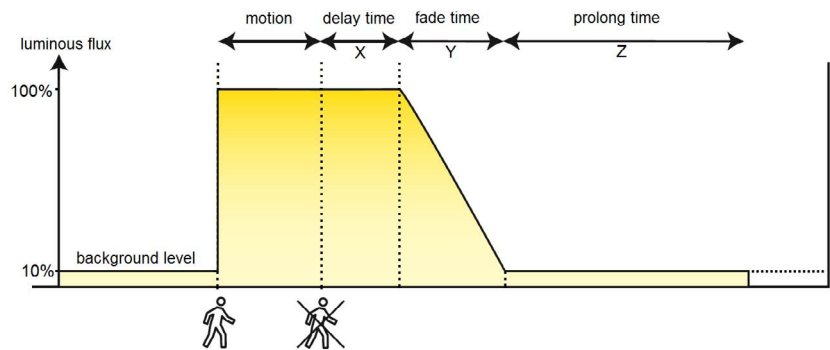
Such light fitting can be controlled by a light fitting of type 161PX... SENS.

Technical data:

The Corridor Mode allows easy power reduction at a fixed value by means of an ordinary 230V control voltage.

Default settings:

- The Corridor Mode must be enabled during the installation of the light fittings. (s. mounting Instructions)
- 100% luminous flux as long as the control phase is active.
- Holding time of 100% luminous flux after switching off the control phase = 0 seconds. By setting the switch-off delay of the motion detector the customer can select an individual holding time
- Dimming ramp 30 seconds
- 10% luminous flux when no movement is detected (reduced operation).
- Automatic cutoff deactivated (light fitting never switches off and provides a background illumination of 10%, but can be switched off by user at any time).



Note:

Since the switching capabilities of LED modules and control devices are limited, dimming without switching of the light fitting completely will result in a much longer life of the light fitting.

16130 0022	161PX 12L22 DIMC	1	15	2.380	159	40	1 x 36W	2,8
16130 0023	161PX 15L34 DIMC	1	21	3.430	163	40	1 x 58W	3,4
16130 0025	161PX 12L42 DIMC	1	27	4.220	156	40	2 x 36W	2,8
16130 0026	161PX 15L60 DIMC	1	39	6.130	157	40	2 x 58W	3,4
16130 0027	161PX 12L60 DIMC	1	39	5.900	151	40	2 x 58W	2,8
16130 0028	161PX 15L75 DIMC	1	49	7.410	151	40	> 2 x 58W	3,4
16130 0029	161PX 12L120 DIMC	1	77	11.470	149	35	2 x 80 bzw. 3 x 58W	3,1
16130 0030	161PX 15L150 DIMC	1	93	14.250	153	35	4 x 58W	3,7
16130 0130	161PX 15L200 DIMC	1	122	19.400	159	35	6 x 58W	4,2

161PX... DIMC-Z30



dimnable via Corridor Mode and automatic switch-off function

Design:

As DIMC version but with automatic switch-off after 30 minutes.

Note:

The light fittings can be controlled with a 161PX... SENS-Z30 type.

Default settings different from DIMC types:

- the Corridor Mode is activated at the factory
- automatic cutoff activated (10% background illumination for 30 minutes, then the light fitting is switched off [0%]).

16130 0032	161PX 12L22 DIMC-Z30	1	15	2.380	159	40	1 x 36W	2,8
16130 0033	161PX 15L34 DIMC-Z30	1	21	3.430	163	40	1 x 58W	3,4
16130 0035	161PX 12L42 DIMC-Z30	1	27	4.220	156	40	2 x 36W	2,8
16130 0036	161PX 15L60 DIMC-Z30	1	39	6.130	157	40	2 x 58W	3,4
16130 0037	161PX 12L60 DIMC-Z30	1	39	5.900	151	40	2 x 58W	2,8
16130 0038	161PX 15L75 DIMC-Z30	1	49	7.410	151	40	> 2 x 58W	3,4
16130 0039	161PX 12L120 DIMC-Z30	1	77	11.470	149	35	2 x 80 bzw. 3 x 58W	3,1
16130 0040	161PX 15L150 DIMC-Z30	1	93	14.250	153	35	4 x 58W	3,7
16130 0131	161PX 15L200 DIMC-Z30	1	122	19.400	159	35	6 x 58W	4,2

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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161PX... SENS



DIMC version with integrated motion detector

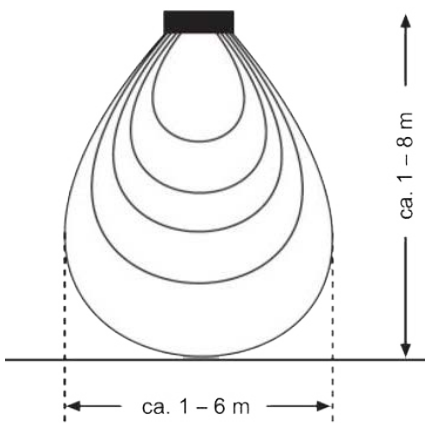
Applications:

Areas with high energy-saving potential in times without presence of persons, e.g. car parks, warehouses, aisles in rack areas etc.

Design:

Same as standard version, but with dimmable ECG, integrated motion detector and additional clamping point, marked with 'L'. This light fitting (Master) controls all fittings of type 161PX... DIMC (Slaves), which are connected to the same circuit.

Detection range of sensor



Technical data:

Detection range of sensor: Adjustable from 1 m - 6 m (depending on the environment); Default: Maximum
 - Objects (partition walls made from steel, concrete beams, etc.) which absorb or reflect the radar waves affect the detection range of the sensor. This must be checked and taken into account in the planning
 - In general, the detection of radial movements (towards the HF sensor) is more reliable than the detection of tangential movements.

- Tangential movements in a circular path are partially not detected.
- Detection range max. 4m at light point heights of about 2.30m
- Detection range max. 6m at light point heights up to max. 8m.

Delay time: Adjustable from 10 sec to 30 min; with Infrared remote control to 60 min; Default: 5 min

Daylight control: Adjustable from 2 Lux; Default: Maximum

Ambient temperature: -20 ° C up to see article table

Factory settings:

- Dimming ramp 30 seconds
- 10% luminous flux when no movement is detected (reduced operation).
- Automatic cutoff deactivated (light fitting never switches off and provides a background illumination of 10%, but can be switched off by user at any time).

Parameter setting:

- Potentiometer on the HF sensor
- Infrared remote control (optional)

16130 0042	161PX 12L22 SENS	1	15	2.380	159	40	1 x 36W	2,9
16130 0043	161PX 15L34 SENS	1	21	3.430	163	40	1 x 58W	3,5
16130 0045	161PX 12L42 SENS	1	27	4.220	156	40	2 x 36W	2,9
16130 0046	161PX 15L60 SENS	1	39	6.130	157	40	2 x 58W	3,5
16130 0047	161PX 12L60 SENS	1	39	5.900	151	40	2 x 58W	2,9
16130 0048	161PX 15L75 SENS	1	49	7.410	151	40	> 2 x 58W	3,5
16130 0049	161PX 12L120 SENS	1	77	11.470	149	35	2 x 80 bzw. 3 x 58W	3,2
16130 0050	161PX 15L150 SENS	1	93	14.250	153	35	4 x 58W	3,8
16130 0132	161PX 15L200 SENS	1	122	19.400	159	35	6 x 58W	4,2

NEW

161PX... SENS-Z30



DIMC version with integrated motion detector

Design:

As SENS version but with automatic switch-off after 30 minutes.

Default settings different from SENS types:

- the Corridor Mode is activated at the factory
- automatic cutoff activated (10% background illumination for 30 minutes, then the light fitting is switched off [0%]).

16130 0052	161PX 12L22 SENS-Z30	1	15	2.380	159	40	1 x 36W	2,9
16130 0053	161PX 15L34 SENS-Z30	1	21	3.430	163	40	1 x 58W	3,5
16130 0055	161PX 12L42 SENS-Z30	1	27	4.220	156	40	2 x 36W	2,9
16130 0056	161PX 15L60 SENS-Z30	1	39	6.130	157	40	2 x 58W	3,5
16130 0057	161PX 12L60 SENS-Z30	1	39	5.900	151	40	2 x 58W	2,9
16130 0058	161PX 15L75 SENS-Z30	1	49	7.410	151	40	> 2 x 58W	3,5
16130 0059	161PX 12L120 SENS-Z30	1	77	11.470	149	35	2 x 80 bzw. 3 x 58W	3,2
16130 0060	161PX 15L150 SENS-Z30	1	93	14.250	153	35	4 x 58W	3,8
16130 0133	161PX 15L200 SENS-Z30	1	122	19.400	159	35	6 x 58W	4,2

NEW

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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NEW 161PX... CS



with smart LIMAS Air light control via radio

Applications:

Areas where no DALI lines are available or planned, but the luminaires are to be controlled intelligently.

Design:

As standard version, but with CASAMBI®-enabled control gear for smart lighting control.

Explanations on smart light control as well as further system components (sensors / switches / pushbuttons etc.) can be found in the catalog section „Light Management - LIMAS Air“.

Product highlights:

- each individual luminaire separately controllable
- compatible with all LIMAS Air system components
- convenient configuration and control via Bluetooth using free smartphone app (Android and iOS)
- no gateway and no internet connection required
- extensive portfolio of sensors and actuators
- significant reduction of operating costs and CO₂ reduction

16130 0061	161PX 12L42 CS	1	27	4.220	156	40	2 x 36W	2,8
16130 0062	161PX 15L60 CS	1	39	6.130	157	40	2 x 58W	3,5

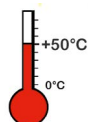
161PX... H50



for high ambient temperatures up to +50°C

Applications:

Power plants, steel plants, machine-oriented areas, areas with high process waste heat, areas close to the ceiling with accumulating heat etc.



16134 0001	161PX 06L12 H50	1	10	1.340	134	50	1 x 18W	1,7
16134 0002	161PX 12L22 H50	1	15	2.380	159	50	1 x 36W	2,8
16134 0003	161PX 15L34 H50	1	21	3.430	163	50	1 x 58W	3,4
16134 0004	161PX 06L20 H50	1	16	2.260	141	50	2 x 18W	1,7
16134 0005	161PX 12L42 H50	1	27	4.220	156	50	2 x 36W	2,8
16134 0006	161PX 15L60 H50	1	39	6.130	157	50	2 x 58W	3,4

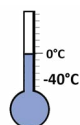


161PX... T40

for ambient temperatures down to -40°C

Applications:

Cooling chambers, frozen food stock etc.



16134 0012	161PX 12L22 T40	1	15	2.380	159	40	1 x 36W	2,8
16134 0013	161PX 15L34 T40	1	21	3.430	163	40	1 x 58W	3,4
16134 0015	161PX 12L42 T40	1	27	4.220	156	40	2 x 36W	2,8
16134 0016	161PX 15L60 T40	1	39	6.130	157	40	2 x 58W	3,4



161PX... T40 / H...

for wide temperature ranges from -40°C up to +60°C/70°C

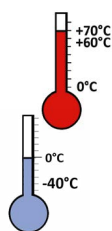
Applications:

Climatic chambers, material container, test benches in the automotive industry, regions with extreme temperature fluctuations etc.

Design:

As standard version, but:

Diffuser: Injection-molded polycarbonate, frosted for glare limitation.



16134 0022	161PX 12L22 T40 H70	1	15	2.380	159	70	1 x 36W	2,8
16134 0023	161PX 15L34 T40 H70	1	21	3.430	163	70	1 x 58W	3,4
16134 0025	161PX 12L42 T40 H70	1	27	4.220	156	70	2 x 36W	2,8
16134 0026	161PX 15L60 T40 H60	1	39	6.130	157	60	2 x 58W	3,4

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Notes:

The light fitting is **not suitable** for use in extremely exposed locations with high mechanical stress (wind load) or infrequent or occasional use (e.g. maintenance or inspection lighting).

For use in extremely exposed locations with high mechanical loads (wind load), we recommend our series 144 ... AUS or 107 ... G2 (PRIMO XR).

For infrequent or occasional use, we recommend our series 107 ... G2 (PRIMO XR) or the installation of a weather protection cover over the luminaire.

When mounting the light fittings on bracket poles or tubular beams/pipes always use original SCHUCH pipe clamps with support (see accessories).

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max.[°C]	Substitute for ca. *	Weight [kg] without packing material
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161PX... AUS



for application in unprotected outdoor areas

Applications:

In protected and unprotected outdoor areas and industrial plants, mounted to walls, ceilings, catwalks and steel structures, pipe brackets, grating, under canopies, bus stops, train stations, subways, construction sites, etc.

Design:

As type 161PX..., but:

Diffuser: UV proof

Pressure compensation element: M20

Entries: 2 glands M20 at one small side, pressure compensation element M20 at the other small side, 1 screw plug M20.

Mounting:

Ceiling and horizontal wall mount or mounting to outreaches, poles, steel structures, catwalks, etc. by means of pipe clamps. For vertical mounting please consult us.

Advantages of the AUS design:

- glass fibre reinforced polyester housing, durable resistant against UV-radiation and chemical components.
- our injection-molded PMMA-covers are extremely UV-resistant and robust (wall thickness 2.0mm)
- gasket are UV-, ozone-, weather-, chemically resistant and non-aging
- pressure compensation element provides controlled venting and thus protects against condensation
- the fitting can be installed in canopied as well as in entirely open outdoor areas



16131 0001	161PX 06L12 AUS	1	10	1.340	134	40	1 x 18W	1,7
16131 0002	161PX 12L22 AUS	1	15	2.380	159	40	1 x 36W	2,8
16131 0003	161PX 15L34 AUS	1	21	3.430	163	40	1 x 58W	3,4
16131 0004	161PX 06L20 AUS	1	16	2.260	141	40	2 x 18W	1,7
16131 0005	161PX 12L42 AUS	1	27	4.220	156	40	2 x 36W	2,8
16131 0006	161PX 15L60 AUS	1	39	6.130	157	40	2 x 58W	3,4
16131 0007	161PX 12L60 AUS	1	39	5.900	151	40	2 x 58W	2,8
16131 0008	161PX 15L75 AUS	1	49	7.410	151	40	> 2 x 58W	3,4
16131 0009	161PX 12L120 AUS	1	77	11.470	149	35	2 x 80 bzw. 3 x 58W	3,1
16131 0010	161PX 15L150 AUS	1	93	14.250	153	35	4 x 58W	3,7
16131 0127	161PX 15L200 AUS	1	122	19.400	159	35	6 x 58W	4,2

NEW

Dustproof/Waterproof Light Fittings

Notes:

The light fittings in Version IFS are not suitable for cleaning with cleaning agents or disinfectants as well as the cleaning with water-jet units.



161PX... IFS



for application in food industry areas

Applications:

Food industry or food processing factories, suppliers to the food industry who are falling in the International Featured Standard Food, BRC, HACCP or who are subject to comparably strict requirements.

Design:

Same as type 161PX... but:

Diffuser: cover Polycarbonate, frosted.

Closure clips: Stainless steel (KE), incl. 2 safety clips (KES) to ensure protection against contact.

16132 0001	161PX 06L12 IFS	1	10	1.340	134	40	1 x 18W	1,7
16132 0002	161PX 12L22 IFS	1	15	2.380	159	40	1 x 36W	2,8
16132 0003	161PX 15L34 IFS	1	21	3.430	163	40	1 x 58W	3,4
16132 0004	161PX 06L20 IFS	1	16	2.260	141	40	2 x 18W	1,7
16132 0005	161PX 12L42 IFS	1	27	4.220	156	40	2 x 36W	2,8
16132 0006	161PX 15L60 IFS	1	39	6.130	157	40	2 x 58W	3,4
16132 0007	161PX 12L60 IFS	1	39	5.900	151	40	2 x 58W	2,8
16132 0008	161PX 15L75 IFS	1	49	7.410	151	40	> 2 x 58W	3,4
16132 0009	161PX 12L120 IFS	1	77	11.470	149	35	2 x 80 bzw. 3 x 58W	3,1
16132 0010	161PX 15L150 IFS	1	93	14.250	153	35	4 x 58W	3,7
16132 0127	161PX 15L200 IFS	1	122	19.400	159	35	6 x 58W	4,2

NEW

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

IFS/BRC/VDMA/HACCP

SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max [°C]	Substitute for ca. *	Weight [kg] without packing material
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Note:

The colour rendering index Ra does not incorporate the remaining part (R9) in the light spectrum. The standard light colour 840 has only a minor R9 value. For meat processing factories, we recommend the use of our light fitting with light colour 940 (special version), which emits a bigger amount of red light.

161PX... LM



for application in food areas

Applications:

Food industry or food processing factories especially in risky areas of the food production or processing, suppliers to the food industry who are falling in the International Featured Standard Food, BRC or HACCP standards or who are subject to comparably strict requirements (e.g. production of food packaging).

Design:

Same as type 161PX... but:

- Diffuser:** Shatterproof, high chemical resistance, elements for glare limitation mounted to the reflector.
- Closure clips:** Stainless steel (KE), incl. 2 safety clips (KES) to ensure protection against contact.

Advantages of the LM version:

- shatterproof diffuser with very high impact resistance (16Nm!) even at a high continuous operating temperature
- resistant to grease and aggressive cleaning agents, disinfectants and solvents (we recommend the respective cleaning agents and disinfectants to be tested on their resistance. Resistance index on request.)

IFS/BRC/VDMA/HACCP

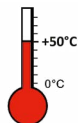
SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.

16132 0021	161PX 06L12 LM	1	10	1.340	134	40	1 x 18W	1,7
16132 0022	161PX 12L22 LM	1	15	2.380	159	40	1 x 36W	2,8
16132 0023	161PX 15L34 LM	1	21	3.430	163	40	1 x 58W	3,4
16132 0024	161PX 06L20 LM	1	16	2.260	141	40	2 x 18W	1,7
16132 0025	161PX 12L42 LM	1	27	4.220	156	40	2 x 36W	2,8
16132 0026	161PX 15L60 LM	1	39	6.130	157	40	2 x 58W	3,4
16132 0027	161PX 12L60 LM	1	39	5.900	151	40	2 x 58W	2,8
16132 0028	161PX 15L75 LM	1	49	7.410	151	40	> 2 x 58W	3,4
16132 0029	161PX 12L120 LM	1	77	11.470	149	35	2 x 80 bzw. 3 x 58W	3,1
16132 0030	161PX 15L150 LM	1	93	14.250	153	35	4 x 58W	3,7
NEW 16132 0128	161PX 15L200 LM	1	122	19.400	159	35	6 x 58W	4,2

161PX... LM H50



for high ambient temperatures up to +50°C

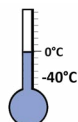


16132 0041	161PX 06L12 LM H50	1	10	1.340	134	50	1 x 18W	1,7
16132 0042	161PX 12L22 LM H50	1	15	2.380	159	50	1 x 36W	2,8
16132 0043	161PX 15L34 LM H50	1	21	3.430	163	50	1 x 58W	3,4
16132 0044	161PX 06L20 LM H50	1	16	2.260	141	50	2 x 18W	1,7
16132 0045	161PX 12L42 LM H50	1	27	4.220	156	50	2 x 36W	2,8
16132 0046	161PX 15L60 LM H50	1	39	6.130	157	50	2 x 58W	3,4

161PX... LM T40



for ambient temperatures down to -40°C



16132 0052	161PX 12L22 LM T40	1	15	2.380	159	40	1 x 36W	2,8
16132 0053	161PX 15L34 LM T40	1	21	3.430	163	40	1 x 58W	3,4
16132 0055	161PX 12L42 LM T40	1	27	4.220	156	40	2 x 36W	2,8
16132 0056	161PX 15L60 LM T40	1	39	6.130	157	40	2 x 58W	3,4

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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NEW

161PX... HE



highly efficient design for reduced energy consumption

16130 0140	161PX 12L42 HE	1	22	4.050	184		2 x 36W	2,8
16130 0141	161PX 12L60 HE	1	35	6.390	183		2 x 58W	2,8
16130 0142	161PX 12L90 HE	1	52	9.500	183		< 3 x 58W	2,8
16130 0143	161PX 12L120 HE	1	69	12.610	183		2 x 80 bzw. 3 x 58W	2,8
16130 0144	161PX 15L34 HE	1	19	3.690	194		1 x 58W	3,4
16130 0145	161PX 15L60 HE	1	32	6.040	189		2 x 58W	3,4
16130 0146	161PX 15L75 HE	1	43	7.980	186		> 2 x 58W	3,4
16130 0147	161PX 15L120 HE	1	70	12.840	183		2 x 80 bzw. 3 x 58W	3,4
16130 0148	161PX 15L150 HE	1	86	15.760	183		4 x 58W	3,4

NEW

161PX... HE DIMD



dimmable via DALI interface

Design:

Same as standard version HE, but with DALI2-ECG and 2 additional clamping points, marked with DA, the polarity does not matter. Dimming Dimming level 1 -100%.
Compatible with LIMAS Line Light Management System.

Note:

The conducting wires to the control input must be mains voltage stable and can be integrated in the connection cable.

16130 0150	161PX 12L42 HE DIMD	1	22	4.050	184		2 x 36W	2,8
16130 0151	161PX 12L60 HE DIMD	1	35	6.390	183		2 x 58W	2,8
16130 0152	161PX 12L90 HE DIMD	1	52	9.500	183		< 3 x 58W	2,8
16130 0153	161PX 12L120 HE DIMD	1	69	12.610	183		2 x 80 bzw. 3 x 58W	2,8
16130 0154	161PX 15L34 HE DIMD	1	19	3.690	194		1 x 58W	3,4
16130 0155	161PX 15L60 HE DIMD	1	32	6.040	189		2 x 58W	3,4
16130 0156	161PX 15L75 HE DIMD	1	43	7.980	186		> 2 x 58W	3,4
16130 0157	161PX 15L120 HE DIMD	1	70	12.840	183		2 x 80 bzw. 3 x 58W	3,4
16130 0158	161PX 15L150 HE DIMD	1	86	15.760	183		4 x 58W	3,4

Dustproof/Waterproof
Light Fittings

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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161PX... ER / HR (RESISTANT)



for use in hazardous areas

Note:

See notes in the technical appendix, chapter 4.4.



Applications:

Areas in trade, trade and industry with corrosive atmospheres or craft gases and vapors that can damage the LED up to and including total failure.

E.g. chemical industry, galvanizing plants, electroplating plants, foundries, tire production and storage, paper mills, sewage treatment plants, waste incineration plants etc. Advice on request.

Options:

– stainless steel clips (KE)

– for higher ambient temperatures up to +50°C

Design:

Like the standard version, but with modifications for increased (ER) or high (HR) protection against corrosive atmospheres or harmful gases.

– with through wiring system

16133 0001	161PX 06L12 ER	1	10	1.340	134	40	1 x 18W	1,7
16133 0002	161PX 12L22 ER	1	15	2.380	159	40	1 x 36W	2,8
16133 0003	161PX 15L34 ER	1	21	3.430	163	40	1 x 58W	3,4
16133 0004	161PX 06L20 ER	1	16	2.370	148	40	2 x 18W	1,7
16133 0005	161PX 12L42 ER	1	27	4.430	164	40	2 x 36W	2,8
16133 0006	161PX 15L60 ER	1	39	6.440	165	40	2 x 58W	3,4
16133 0007	161PX 12L60 ER	1	39	6.200	159	40	2 x 58W	2,8
16133 0008	161PX 15L75 ER	1	49	7.780	159	40	> 2 x 58W	3,4
16133 0009	161PX 12L120 ER	1	77	12.040	156	35	2 x 80 bzw. 3 x 58W	3,1
16133 0010	161PX 15L150 ER	1	93	14.960	161	35	4 x 58W	3,7
16133 0011	161PX 06L12 HR	1	10	1.340	134	40	1 x 18W	2,0
16133 0012	161PX 12L22 HR	1	15	2.380	159	40	1 x 36W	3,1
16133 0013	161PX 15L34 HR	1	21	3.430	163	40	1 x 58W	3,7
16133 0014	161PX 06L20 HR	1	16	2.370	148	40	2 x 18W	2,0
16133 0015	161PX 12L42 HR	1	27	4.430	164	40	2 x 36W	3,1
16133 0016	161PX 15L60 HR	1	39	6.440	165	40	2 x 58W	3,7
16133 0017	161PX 12L60 HR	1	39	6.200	159	40	2 x 58W	3,1
16133 0018	161PX 15L75 HR	1	49	7.780	159	40	> 2 x 58W	3,7
16133 0019	161PX 12L120 HR	1	77	12.040	156	35	2 x 80 bzw. 3 x 58W	3,8
16133 0020	161PX 15L150 HR	1	93	14.960	161	35	4 x 58W	4,3

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Accessories / Spare Parts

Article no.	Type		Article no.	Type	
spare glasses, PMMA frosted			spare glasses, PC frosted		
16111 9040	ABD 161PX 06		16111 9043	ABD 161PX 06 PC	
16111 9041	ABD 161PX 12		16111 9044	ABD 161PX 12 PC	
16111 9042	ABD 161PX 15		16111 9045	ABD 161PX 15 PC	
spare glasses LM-version					
16111 9046	ABD 161PX 06 LM				
16111 9047	ABD 161PX 12 LM				
16111 9048	ABD 161PX 15 LM				
Fasteners					
90053 9009	KKS FR VE10	plastic safety clips (packing unit 10 pcs.)			
90055 9007	KE/KES G2 VE10	stainless steel clips, incl. 2 safety clips (packing unit 10 pcs.)			
90053 9004	KKS P	1 pair of safety clips (for LED version), plastic			
90055 9006	KES G2 P	1 pair of safety clips (for LED version), stainless steel			
Cable entries/pressure compensation elements					
90063 9000	2511	blinking plug M20			
25610 9000	2561	plastic cable gland M20 x 1,5			
25600 9000	2560	plastic cable gland M25 x 1,5			
90259 9002	DAE20	pressure compensation element M20			
90259 9003	DAE 20/25	adapter gland M20 -> M25 with pressure compensation			
Pipe clamps					
90094 0005	183 RO 112 A P SD	2 pcs., 1 1/2" stainless steel, with support			
90094 0006	183 RO 2 A P SD	2 pcs., 2" stainless steel, with support			
Consider mounting distances when installing the light fittings by pipe clamps to pole outreaches or any brackets.					
Angle brackets, aluminium					
90045 9001	HW 30 P	pair of angle brackets 30°			
90045 9002	HW 45 P	pair of angle brackets 45°			
90045 9004	HW 60 P	pair of angle brackets 60°			
90045 9003	HW 90 P	pair of angle brackets 90°			

PROXIMA

Dustproof/Waterproof LED Light Fitting with Diffuser with variable setting of the luminous flux Series 161PX... VARIO

Applications:

Factories in which, for reasons of maximum standardization and economic storage, only one type of damp-proof luminaire is to be used, which can be used for a wide variety of lighting tasks due to its variably adjustable luminous flux. (For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Glass fibre reinforced polyester resin, foamed silicone gasket.

Diffuser: Injection-molded acrylic glass, frosted for glare limitation.

Closure: Three-part plastic safety clips (KKS) to ensure protection against accidental contact.

Reflector: Aluminium, painted, can be suspended or removed and carries the electrical components.

DIP switch for setting the luminous flux of the luminaire.

Connection: 3-pole

Cable entries: 3 plugs M20, loop in-out possible without further modification.

Mounting: 2 stainless steel retaining clips, 2 brackets for chain suspension, holes pre-pressed for direct fixing, sealing and pressure disks included in scope of deliver.

Technical data:

LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50.000h$ at 25°C ambient temperature, service life $L_{80} > 70.000h$ and $L_{70} > 100.000h$ at max. ambient temperature

ECG: 220-240V, 50/60Hz, overload and short-circuit protection

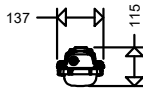
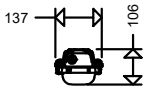
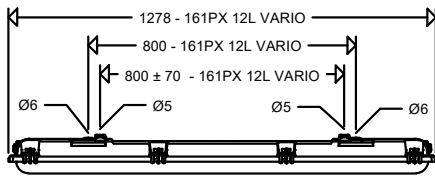
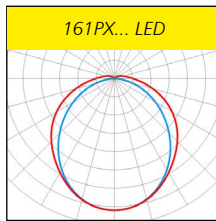
DIP switch for setting the luminous flux of the luminaire.

Ambient temperature: 20°C up to +35/40/45°C (see article table)

Options:

- 2,200K, 2,700K, 3,000K, 5,000K, 6.500K

- with through wiring system
- PC-diffuser frosted (PC)



DIP switch for setting the luminous flux of the luminaire



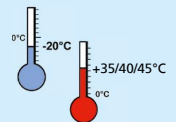
Standard cable entries for looping the mains cable on one side (loop in/loop out):

We deliver the light fittings with 2 cable entries on one small side. This feature allows an optimal adjustment to all local conditions and it will consequently save the typical quite expensive through wiring system. (Surcharge for 5-pole version).



Product highlights of the VARIO version:

- universally usable due to variable setting of the luminous flux, depending on the requirement (replaces fluorescent lamps from 1x18 up to 2x58W)
- simple and quick adjustment on-site without tools
- can be changed at any time (e.g. change of use of the premises with new requirements in regard to the level of illumination)
- for temperatures from -20°C up to +35/40/45°C (depending on setting)
- great versatility, thus economical storage due to standardization (only one light fitting instead of multiple versions)



General product highlights of the 161PX... series:

- high-impact resistant housing, wall thickness 1.8 mm throughout
- diffuser with very high mechanical stability, wall thickness 2.0 mm throughout
- one housing width for all versions
- safety clips to ensure protection against contact
- FastFix quick mounting system with retaining clips made of stainless steel
- flexible mounting with movable retaining clips
- front-side in/out wiring (3-pole) possible as standard due to 2 entries on one side
- variable cable entry possible through additional entries on the top of the enclosure at the front or in the centre, centring holes available
- homogeneous illumination by using frosted diffusers
- highest efficiency due to use of top-quality components
- high colour rendering CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- with Ψ-sign, suitable for rooms with increased fire risk
- highest flexibility due to almost unlimited modification possibilities
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.



Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W]	Amb. temp. max. [°C]	Substitute for ca. *	(without packing material)
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161PX... VARIO



The luminous flux is variably adjustable to almost every value between 1.590lm and 5.900lm. Connected load and admis-

sible ambient temperature will change depending on the setting of the luminous flux.

16130 0090	161PX 12L VARIO	11	1.590	145	45	1 x 18W	2,8
		15	2.380	159	40	1 x 36W	
		22	3.400 ²⁾	155	40	1 x 58W	
		27	4.220	156	40	2 x 36W	
		39	5.900	151	35	2 x 58W	

Notes:

The light fitting is not to be used in areas with high mechanical stress (wind) or seldom usage (i.e. maintenance and inspection only).

When mounting the light fittings on bracket poles or tubular beams/pipes always use original SCHUCH pipe clamps with support (see accessories).

161PX... VARIO AUS



for application in unprotected outdoor areas

Applications:

In protected and unprotected outdoor areas and industrial plants, mounted to walls, ceilings, catwalks and steel structures, pipe brackets, grating, under canopies, bus stops, train stations, subways, construction sites, etc.

Design:

Same as type 161PX 12L VARIO, but:

Diffuser: UV proof

Pressure compensation element: M20

Entries: 2 glands M20 at one small side, pressure compensation element M20 at the other small side, 1 screw plug M20.

Mounting:

Ceiling and horizontal wall mount or mounting to out-reaches, poles, steel structures, catwalks, etc. by means of pipe clamps.

16131 0090	161PX 12L VARIO AUS	11	1.590	145	45	1 x 18W	2,8
		15	2.380	159	40	1 x 36W	
		22	3.400 ²⁾	155	40	1 x 58W	
		27	4.220	156	40	2 x 36W	
		39	5.900	151	35	2 x 58W	

1) Examples of possible settings
2) Factory setting

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Advantages of the AUS design:

- glass fibre reinforced polyester housing, durable resistant against UV-radiation and chemical components.
- our injection-molded PMMA-covers are extremely UV-resistant and robust (wall thickness 2.0mm)
- gasket are UV-, ozone-, weather-, chemically resistant and non-aging
- pressure compensation element provides controlled venting and thus protects against condensation
- the fitting can be installed in canopied as well as in entirely open outdoor areas



Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W]	Amb. temp. max. [°C]	Substitute for ca. *	(without packing material)
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161PX... VARIO LM



for application in food industry areas

Applications:

Food industry or food processing factories especially in risky areas of the food production or processing, suppliers to the food industry who are falling in the International Featured Standard Food, BRC or HACCP standards or who are subject to comparably strict requirements (e.g. production of food packaging).

Design:

Same as type 161PX 12... VARIO but:

Diffuser: Shatterproof, high chemical resistance, cover for glare limitation fixed to reflector.

Closure clips: Stainless steel (KE), incl. 2 safety clips (KES) to ensure protection against contact.

16132 0090	161PX 12L VARIO LM	11	1.590	145	45	1 x 18W	2,8
		15	2.380	159	40	1 x 36W	
		22	3.400 ²⁾	155	40	1 x 58W	
		27	4.220	156	40	2 x 36W	
		39	5.900	151	35	2 x 58W	

1) Examples of possible settings
2) Factory setting

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Advantages of the LM version:

- shatterproof diffuser with very high impact resistance (16Nm!) even at a high continuous operating temperature
- resistant to grease and aggressive cleaning agents, disinfectants and solvents (we recommend the respective cleaning agents and disinfectants to be tested on their resistance. Resistance index on request.)

IFS/BRC/VDMA/HACCP

SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.



Dustproof/Waterproof Light Fittings

Accessories / Spare Parts

Article No.	Type	
Spare diffuser		
16111 9041	ABD 161PX 12	cover, frosted PMMA diffuser, for 161PX 12 ...
16111 9044	ABD 161PX 12 PC	cover, frosted PC diffuser, for 161PX 12 ...
16111 9047	ABD 161PX 12 LM	cover, diffuser high chemical resistant clear LM, for 161PX 12 ...

Additional accessories see series 161PX...

Dustproof/Waterproof LED Light Fitting with Diffuser Series 161/162.. L..

Applications:

In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, cold stores, low temperature stores, cooling chambers and walkable low temperature cabins in hotels, climate chambers, roofed outdoor areas, hard to reach areas with high downtime and maintenance costs when replacing the lamps. etc.(For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Glass fibre reinforced polyester resin, foamed silicone gasket.

Diffuser: Injection-molded acrylic glass, frosted for glare limitation.

Closure: Three-part captive plastic clips (KK), incl. 2 safety clips (KKS) to ensure protection against contact.

Reflector: Aluminium, painted, can be suspended or removed and carries the electrical components.

Connection: 3-pole or 5-pole terminal (DIMD).

Cable entries: 2 plugs M20.

Mounting: Closed knock-outs for direct ceiling mounting (to be opened at site). Sealing and pressure disks inside each fitting.

Technical data:

LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50.000h$ at 25°C ambient temperature, service life $L_{80} > 70.000h$ and $L_{70} > 100.000h$ at max. ambient temperature

ECG: 220-240V, 50/60Hz, overload and short-circuit protection

Ambient temperature: -20°C (-40°C for types ...T40) up to ..°C see article table

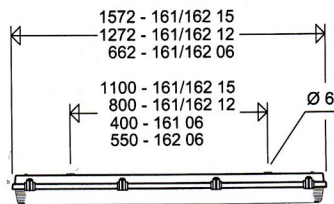
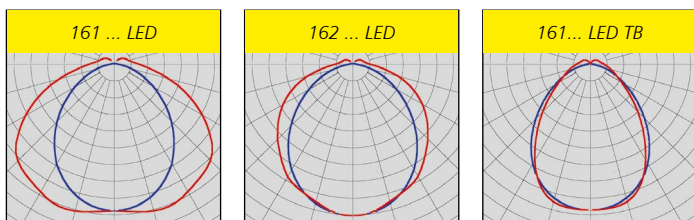
Options:

- 2,200K, 6,500K
- high colour rendering index $R_a > 90$ (light colour 940)
- signalization with **coloured LED**
- **amber-colored LED** e. g. for insect-friendly lighting, nature reserves, locks etc.
- protection class II
- for connection to group or central battery systems (ZB) or emergency mains respectively
- PC-diffuser, frosted (PC)
- stainless steel clips (KE)
- with through wiring system

Product highlights:

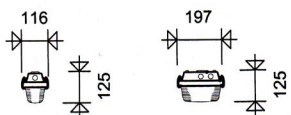
- robust, extremely strong quality light fitting especially suited for rough industrial use
- high-impact resistant housing, excellent chemical and UV-resistance
- **highest efficiency** to use top-quality ECG and LED modules
- diffuser with high mechanical stability, fourfold safety against outer impact
- **homogeneous illumination by using frosted diffusers**, no particular light points visible, comfortable perception of light, brilliant glare limitation
- **high colour rendering CRI > 80**, according to the workplace guide lines suitable for nearly all plant locations
- with Ψ -sign, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- **sustainable**, control gear and LED-module replaceable by qualified personnel on-site
- **future proof by using standardized LED-modules (Zhaga)**

DB standardized by Deutsche Bahn AG



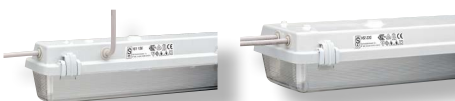
Series 161...

Series 162...



Cable entries for looping the mains cable on one side (loop in/loop out):

Optionally the light fittings can be supplied with 2 cable entries on one small side. This feature allows an optimal adjustment to all local conditions and it will consequently save the typical quite expensive through wiring system (preparation at additional cost).



Notes:

Maximum energy saving by using types which are optimized for energy consumption.

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max.[°C]	Substitute for ca. *	Weight [kg] without packing material
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161/162...



optimized for energy consumption (1 : 1 substitute fo fluorescent types)

16117 0309	161 06L12	1	10	1.390	139	40	1 x 18W	1,8
16117 0301	161 12L22	1	15	2.390	159	40	1 x 36W	2,7
16117 0303	161 15L34	1	21	3.440	164	40	1 x 58W	3,0
16117 0310	161 06L20	1	16	2.370	148	40	2 x 18W	1,8
16117 0302	161 12L42	1	27	4.240	157	40	2 x 36W	2,7
16117 0304	161 15L60	1	39	6.160	158	40	2 x 58W	3,0

with high luminous flux

16117 0305	161 12L60	1	39	5.920	152	30	2 x 58W	2,7
16117 0306	161 15L75	1	49	7.440	152	30	> 2 x 58W	3,0
16215 0302	162 12L120	2	78	11.410	146	35	2 x 80 bzw. 3 x 58W	4,3
16215 0303	162 15L150	2	97	14.310	148	35	4 x 58W	4,8

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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161/162... DIMD



dimmable via DALI interface

Design:

Same as standard version, but with DALI2-ECG and 2 additional clamping points, marked with DA, the polarity does not matter. Dimming Dimming level 1 -100%. Compatible with LIMAS Line Light Management System.

Note:

The conducting wires to the control input must be mains voltage stable and can be integrated in the connection cable.

16117 0319	161 06L12 DIMD	1	10	1.390	139	40	1 x 18W	1,9
16117 0311	161 12L22 DIMD	1	15	2.390	159	40	1 x 36W	2,8
16117 0313	161 15L34 DIMD	1	21	3.440	164	40	1 x 58W	3,1
16117 0320	161 06L20 DIMD	1	16	2.370	148	40	2 x 18W	1,9
16117 0312	161 12L42 DIMD	1	27	4.240	157	40	2 x 36W	2,8
16117 0314	161 15L60 DIMD	1	39	6.160	158	40	2 x 58W	3,1
16117 0315	161 12L60 DIMD	1	39	5.920	152	30	2 x 58W	2,7
16117 0316	161 15L75 DIMD	1	49	7.440	152	30	> 2 x 58W	3,1
16215 0312	162 12L120 DIMD	2	78	11.410	146	35	2 x 80 bzw. 3 x 58W	4,4
16215 0313	162 15L150 DIMD	2	97	14.310	148	35	4 x 58W	4,9



161... DIMC



with Corridor Mode

Applications:

Areas where light fittings are controlled via motion detector or door contact, e.g. storage areas, shelf aisles. Areas with high energy-saving potential at times without presence of persons, e.g. car parks, warehouses, aisles in rack areas etc.

Design:

Same as standard version, but with dimmable ECG and additional clamping point, marked with L'.

Note:

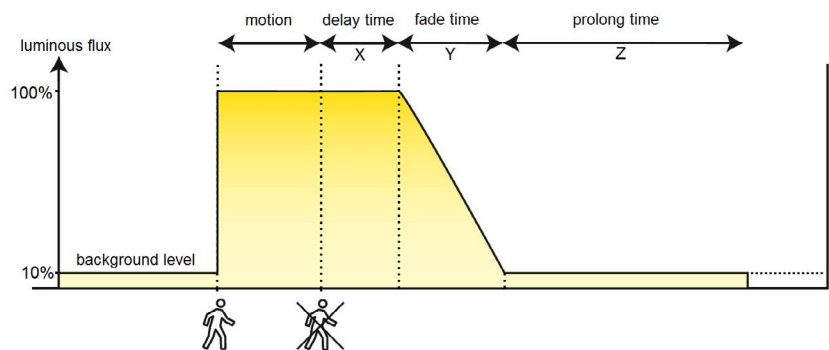
Such light fitting can be controlled by a light fitting of type 161 .. L ..SENS.

Technical data:

The Corridor Mode allows easy power reduction at a fixed value by means of an ordinary 230V control voltage.

Default settings:

- The Corridor Mode must be enabled during the installation of the light fittings. (s. mounting Instructions)
- 100% luminous flux as long as the control phase is active.
- Holding time of 100% luminous flux after switching off the control phase = 0 seconds. By setting the switch-off delay of the motion detector the customer can select an individual holding time
- Dimming ramp 30 seconds
- 10% luminous flux when no movement is detected (reduced operation).
- Automatic cutoff deactivated (light fitting never switches off and provides a background illumination of 10%, but can be switched off by user at any time).



Note:

Since the switching capabilities of LED modules and control devices are limited, dimming without switching of the light fitting completely will result in a much longer life of the light fitting.

16117 0420	161 12L22 DIMC	1	15	2.390	159	40	1 x 36W	2,8
16117 0422	161 15L34 DIMC	1	21	3.440	164	40	1 x 58W	3,1
16117 0421	161 12L42 DIMC	1	27	4.240	157	40	2 x 36W	2,8
16117 0423	161 15L60 DIMC	1	39	6.160	158	40	2 x 58W	3,1

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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161... DIMC-Z30



with Corridor Mode and automatic switch-off function

Design:

As DIMC version but with automatic switch-off after 30 minutes.

Note:

The light fittings can be controlled with a 161...SENS-Z30 type.

Default settings different from DIMC types:

- the Corridor Mode is activated at the factory
- automatic cutoff activated (10% background illumination for 30 minutes, then the light fitting is switched off [0%]).

16117 0710	161 12L22 DIMC-Z30	1	15	2.390	159	40	1 x 36W	2,8
16117 0712	161 15L34 DIMC-Z30	1	21	3.440	164	40	1 x 58W	3,1
16117 0711	161 12L42 DIMC-Z30	1	27	4.240	157	40	2 x 36W	2,8
16117 0713	161 15L60 DIMC-Z30	1	39	6.160	158	40	2 x 58W	3,1

161... SENS



DIMC version with integrated motion detector

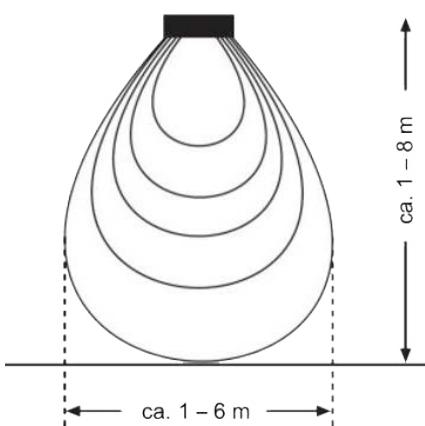
Applications:

Areas with high energy-saving potential in times without presence of persons, e.g. car parks, warehouses, aisles in rack areas etc.

Design:

Same as standard version, but with dimmable ECG, integrated motion detector and additional clamping point, marked with 'L'. This light fitting (Master) controls all fittings of type 161... DIMC (Slaves), which are connected to the same circuit.

Detection range of sensor



Technical data:

Detection range of sensor: Adjustable from 1 m - 6 m (depending on the environment); Default: Maximum
 - Objects (partition walls made from steel, concrete beams, etc.) which absorb or reflect the radar waves affect the detection range of the sensor. This must be checked and taken into account in the planning
 - In general, the detection of radial movements (towards the HF sensor) is more reliable than the detection of tangential movements.

- Tangential movements in a circular path are partially not detected.

- Detection range max. 4m at light point heights of about 2.30m

- Detection range max. 6m at light point heights up to max. 8m.

Delay time: Adjustable from 10 sec to 30 min; with Infrared remote control to 60 min; Default: 5 min

Daylight control: Adjustable from 2 Lux; Default: Maximum

Ambient temperature: -20 ° C up to see article table

Factory settings:

- Dimming ramp 30 seconds

- 10% luminous flux when no movement is detected (reduced operation).

- Automatic cutoff deactivated (light fitting never switches off and provides a background illumination of 10%, but can be switched off by user at any time).

Parameter setting:

- Potentiometer on the HF sensor

- Infrared remote control (optional)

16117 0697	161 12L22 SENS	1	15	2.390	159	40	1 x 36W	2,9
16117 0699	161 15L34 SENS	1	21	3.440	164	40	1 x 58W	3,2
16117 0698	161 12L42 SENS	1	27	4.240	157	40	2 x 36W	2,9
16117 0700	161 15L60 SENS	1	39	6.160	158	40	2 x 58W	3,2



161... SENS-Z30

DIMC version with integrated motion detector

Design:

As SENS version but with automatic switch-off after 30 minutes.

Default settings different from SENS types:

- the Corridor Mode is activated at the factory

- automatic cutoff activated (10% background illumination for 30 minutes, then the light fitting is switched off [0%]).

16117 0715	161 12L22 SENS-Z30	1	15	2.390	159	40	1 x 36W	2,9
16117 0718	161 15L34 SENS-Z30	1	21	3.440	164	40	1 x 58W	3,2
16117 0716	161 12L42 SENS-Z30	1	27	4.240	157	40	2 x 36W	2,9
16117 0719	161 15L60 SENS-Z30	1	39	6.160	158	40	2 x 58W	3,2

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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161/162... TB



narrow-wide beam, optics with 60° angle (TB)

Applications:

Illumination for workplaces, aisles, etc.

Design:

Same as standard versions 161/162... LED, but with narrow-wide beam optics with 60° (TB) beam angle.

16117 0604	161 15L60TB	1	39	5.980	153	40	2 x 58W	3,2
16215 0601	162 15L120TB	2	78	11.960	153	40	2 x 80 bzw. 3 x 58W	5,4

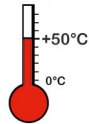
161... H50



for high ambient temperatures up to +50°C

Applications:

Power plants, steel plants, machine-oriented areas, areas with high process waste heat, areas close to the ceiling with accumulating heat etc.



16117 0324	161 06L12 H50	1	10	1.390	139	50	1 x 18W	2,0
16117 0334	161 06L12 H50 DIMD	1	10	1.390	139	50	1 x 18W	2,0
16117 0321	161 12L22 H50	1	15	2.390	159	50	1 x 36W	2,7
16117 0331	161 12L22 H50 DIMD	1	15	2.390	159	50	1 x 36W	2,8
16117 0322	161 15L34 H50	1	21	3.440	164	50	1 x 58W	3,0
16117 0332	161 15L34 H50 DIMD	1	21	3.440	164	50	1 x 58W	3,1
16117 0490	161 06L20 H50	1	16	2.370	148	50	2 x 18W	2,0
16117 0493	161 06L20 H50 DIMD	1	16	2.370	148	50	2 x 18W	2,0
16117 0491	161 12L42 H50	1	27	4.240	157	50	2 x 36W	2,7
16117 0494	161 12L42 H50 DIMD	1	27	4.240	157	50	2 x 36W	2,8
16117 0492	161 15L60 H50	1	39	6.160	158	50	2 x 58W	3,0
16117 0495	161 15L60 H50 DIMD	1	39	6.160	158	50	2 x 58W	3,1

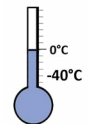
161... T40



for ambient temperatures down to -40°C

Applications:

Cooling chambers, frozen food stock etc.



16117 0409	161 06L12 T40	1	9	1.190	132	40	1 x 18W	1,8
16117 0401	161 12L22 T40	1	14	2.390	171	40	1 x 36W	2,7
16117 0403	161 15L34 T40	1	21	3.440	164	40	1 x 58W	3,0
16117 0410	161 06L20 T40	1	18	2.620	146	40	2 x 18W	1,8
16117 0402	161 12L42 T40	1	27	4.240	157	40	2 x 36W	2,7
16117 0404	161 15L60 T40	1	38	6.160	162	40	2 x 58W	3,0

161/162... T40 / H...



for high ambient temperatures up to +70°C and wide temperature ranges from -40°C up to +70°C

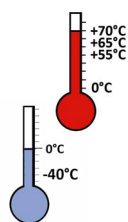
Applications:

Climatic chambers, material container, test benches in the automotive industry, regions with extreme temperature fluctuations etc.

Design:

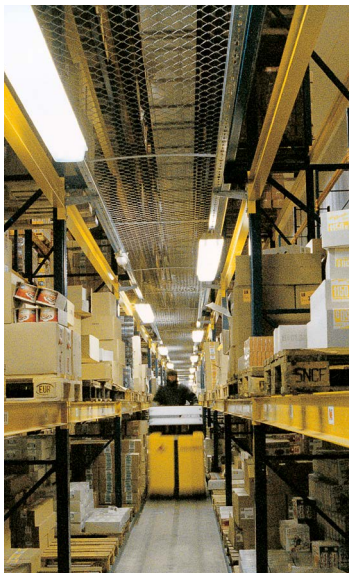
As standard version, but:

Diffuser: Injection-molded polycarbonate, frosted for glare limitation.



16117 0509	161 06L12 T40 H65	1	9	1.190	132	65	1 x 18W	1,8
16117 0501	161 12L22 T40 H65	1	14	2.390	171	65	1 x 36W	2,7
16117 0503	161 15L34 T40 H65	1	21	3.440	164	65	1 x 58W	3,0
16117 0510	161 06L20 T40 H55	1	18	2.620	146	55	2 x 18W	1,8
16117 0502	161 12L42 T40 H55	1	27	4.240	157	55	2 x 36W	2,7
16117 0504	161 15L60 T40 H55	1	38	6.160	162	55	2 x 58W	3,0
16215 0520	162 12L22 T40 H70	1	15	2.390	159	70	1 x 36W	4,1
16215 0501	162 15L34 T40 H70	1	21	3.440	164	70	1 x 58W	4,8
16215 0521	162 12L42 T40 H70	1	28	4.840	173	70	2 x 36W	4,1
16215 0502	162 15L60 T40 H60	1	39	6.590	169	60	2 x 58W	4,8

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Dustproof/Waterproof Light Fittings

Notes:

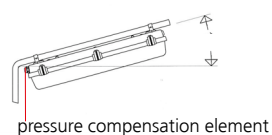
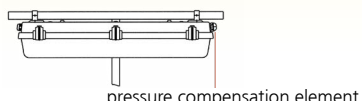
The light fitting is **not suitable** for use in extremely exposed locations with high mechanical stress (wind load) or infrequent or occasional use (e.g. maintenance or inspection lighting).

For use in extremely exposed locations with high mechanical loads (wind load), we recommend our series 144 ... AUS or 107 ... G2 (PRIMO XR).

For infrequent or occasional use, we recommend our series 107 ... G2 (PRIMO XR) or the installation of a weather protection cover over the luminaire.

When mounting the light fittings on bracket poles or tubular beams/pipes always use original SCHUCH pipe clamps with support (see accessories).

pole mount with pipe clamps



Notes:

The light fittings in Version IFS are not suitable for cleaning with cleaning agents or disinfectants as well as the cleaning with water-jet units.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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161/162... AUS



for application in unprotected outdoor areas

Applications:

In protected and unprotected outdoor areas and industrial plants, mounted to walls, ceilings, catwalks and steel structures, pipe brackets, grating, under canopies, bus stops, train stations, subways, construction sites, etc.

Design:

As type 161/162... LED, but:

Diffuser: UV proof

Pressure compensation element: M20

Entries: 1 gland M20 at one small side, pressure compensation element M20 at the other small side.

Mounting:

Ceiling and horizontal wall mount or mounting to outreaches, poles, steel structures, catwalks, etc. by means of pipe clamps. For vertical mounting please consult us.

Advantages of the AUS design:

- glass fibre reinforced polyester housing, durable resistant against UV-radiation and chemical components.
- our injection-molded PMMA-covers are extremely UV-resistant and robust (wall thickness 1.9mm)
- profile gaskets are UV-, ozone-, weather-, chemically resistant and non-aging
- pressure compensation element provides controlled venting and thus protects against condensation
- the fitting can be installed in canopied as well as in entirely open outdoor areas

optimized for energy consumption (1 : 1 substitute for fluorescent types)

16117 0350	161 06L12 AUS	1	10	1.390	139	40	1 x 18W	1,8
16117 0351	161 12L22 AUS	1	15	2.390	159	40	1 x 36W	2,7
16117 0353	161 15L34 AUS	1	21	3.440	164	40	1 x 58W	3,0
16117 0358	161 06L20 AUS	1	16	2.370	148	40	2 x 18W	1,8
16117 0352	161 12L42 AUS	1	27	4.240	157	40	2 x 36W	2,7
16117 0354	161 15L60 AUS	1	39	6.160	158	40	2 x 58W	3,0

with high luminous flux

16117 0355	161 12L60 AUS	1	39	5.920	152	30	2 x 58W	2,7
16117 0356	161 15L75 AUS	1	49	7.440	155	30	> 2 x 58W	3,0
16215 0352	162 12L120 AUS	2	78	11.410	146	35	2 x 80 bzw. 3 x 58W	4,3
16215 0353	162 15L150 AUS	2	97	14.310	148	35	4 x 58W	4,8

161/162... IFS



for application in food industry areas

Applications:

Food industry or food processing factories, suppliers to the food industry who are falling in the International Featured Standard Food, BRC, HACCP or who are subject to comparably strict requirements.

Design:

Same as type 161/162 .. L.but:

Diffuser: cover Polycarbonate, frosted.

Closure clips: Stainless steel (KE), incl. 2 safety clips (KES) to ensure protection against contact.

optimized for energy consumption (1 : 1 substitute for fluorescent types)

16119 0039	161 06L12 IFS	1	10	1.390	139	40	1 x 18W	1,8
16119 0041	161 12L22 IFS	1	15	2.390	159	40	1 x 36W	2,7
16119 0042	161 15L34 IFS	1	21	3.440	164	40	1 x 58W	3,0
16119 0040	161 06L20 IFS	1	16	2.370	148	40	2 x 18W	1,8
16119 0043	161 12L42 IFS	1	27	4.240	157	40	2 x 36W	2,7
16119 0044	161 15L60 IFS	1	39	6.160	158	40	2 x 58W	3,0

with high luminous flux

16119 0305	161 12L60 IFS	1	39	5.920	152	30	2 x 58W	2,7
16119 0046	161 15L75 IFS	1	49	7.440	155	30	> 2 x 58W	3,0
16219 0302	162 12L120 IFS	2	78	11.410	146	35	2 x 80 bzw. 3 x 58W	4,3
16219 0004	162 15L150 IFS	2	97	14.310	148	35	4 x 58W	4,8

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

IFS/BRC/VDMA/HACCP

SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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Note:
The colour rendering index Ra does not incorporate the remaining part (R9) in the light spectrum. The standard light colour 840 has only a minor R9 value. For meat processing factories, we recommend the use of our light fittings with light colour 940 (special version), which emits a bigger amount of red light.

161/162... LM



for application in food areas

Applications:

Food industry or food processing factories especially in risky areas of the food production or processing, suppliers to the food industry who are falling in the International Featured Standard Food, BRC or HACCP standards or who are subject to comparably strict requirements (e.g. production of food packaging).

Design:

Same as type 161/162... LED but:

Diffuser: Shatterproof, high chemical resistance, elements for glare limitation mounted to the reflector.

Closure clips: Stainless steel (KE), incl. 2 safety clips (KES) to ensure protection against contact.

Advantages of the LM version:

- shatterproof diffuser with very high impact resistance (16Nm!) even at a high continuous operating temperature
- resistant to grease and aggressive cleaning agents, disinfectants and solvents (we recommend the respective cleaning agents and disinfectants to be tested on their resistance (resistance index on request.))

IFS/BRC/VDMA/HACCP

SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.

optimized for energy consumption (1 : 1 substitute for fluorescent types)

16119 0005	161 06L12 LM	1	10	1.390	139	40	1 x 18W	1,8
16119 0001	161 12L22 LM	1	15	2.390	159	40	1 x 36W	2,7
16119 0002	161 15L34 LM	1	21	3.440	164	40	1 x 58W	3,0
16119 0006	161 06L20 LM	1	16	2.370	148	40	2 x 18W	1,8
16119 0003	161 12L42 LM	1	27	4.240	157	40	2 x 36W	2,7
16119 0004	161 15L60 LM	1	39	6.160	158	40	2 x 58W	3,2

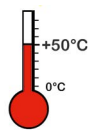
with high luminous flux

16119 0018	161 12L60 LM	1	39	5.920	152	30	2 x 58W	2,7
16119 0019	161 15L75 LM	1	49	7.440	152	30	> 2 x 58W	3,0
16219 0002	162 15L100 LM	2	67	10.510	157	40	2 x 80W	4,8
16219 0006	162 12L120 LM	2	78	11.410	146	35	2 x 80 bzw. 3 x 58W	4,3
16219 0007	162 15L150 LM	2	97	14.310	148	35	4 x 58W	4,8

161... LM H50



for high ambient temperatures up to +50°C

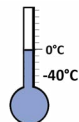


16119 0067	161 06L12 LM H50	1	10	1.390	139	50	1 x 18W	2,0
16119 0051	161 12L22 LM H50	1	15	2.390	159	50	1 x 36W	2,8
16119 0052	161 15L34 LM H50	1	21	3.440	164	50	1 x 58W	3,0
16119 0050	161 06L20 LM H50	1	16	2.370	148	50	2 x 18W	1,6
16119 0053	161 12L42 LM H50	1	27	4.240	157	50	2 x 36W	4,3
16119 0054	161 15L60 LM H50	1	39	6.160	158	50	2 x 58W	3,1

161... LM T40



for ambient temperatures down to -40°C



16119 0101	161 12L22 LM T40	1	14	2.390	171	40	1 x 36W	2,7
16119 0102	161 15L34 LM T40	1	21	3.440	164	40	1 x 58W	3,2
16119 0103	161 12L42 LM T40	1	27	4.240	157	40	2 x 36W	2,7
16119 0104	161 15L60 LM T40	1	38	6.160	162	40	2 x 58W	3,2

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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161... ER / HR (RESISTANT)



Note:
See notes in the technical appendix, chapter 4.4.

for use in hazardous areas

Applications:

Areas in trade, trade and industry with corrosive atmospheres or craft gases and vapors that can damage the LED up to and including total failure.
E.g. chemical industry, galvanizing plants, electroplating plants, foundries, tire production and storage, paper mills, sewage treatment plants, waste incineration plants etc. Advice on request.

Design:

Like the standard version, but with modifications for increased (ER) or high (HR) protection against corrosive atmospheres or harmful gases.

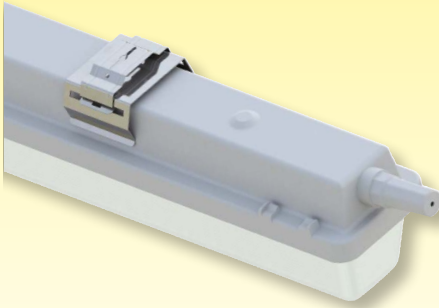
Options:

- stainless steel clips (KE)
- for higher ambient temperatures up to +50°C
- with through wiring system

16123 0003	161 12L22 ER	1	15	2.490	166	40	1 x 36W	2,7
16123 0005	161 15L34 ER	1	21	3.590	171	40	1 x 58W	3,0
16123 0004	161 12L42 ER	1	27	4.410	163	40	2 x 36W	2,7
16123 0006	161 15L60 ER	1	39	6.400	164	40	2 x 58W	3,0
16123 0503	161 12L22 HR	1	15	2.490	166	40	1 x 36W	3,0
16123 0505	161 15L34 HR	1	21	3.590	171	40	1 x 58W	3,3
16123 0504	161 12L42 HR	1	27	4.410	163	40	2 x 36W	3,0
16123 0506	161 15L60 HR	1	39	6.400	164	40	2 x 58W	3,3

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.





Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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161... FastFix/FastConnect (FF/FC)

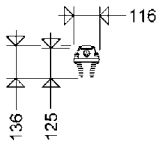
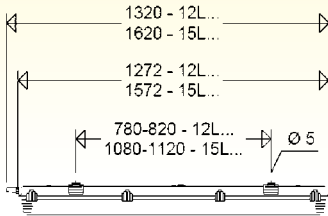


with FastFix mounting system

Design: Same as standard but, with pre-assembled quick mounting system (FastFix) and quick connector (FastConnect), for 3-pole connecting cable up to 2.5mm² (Ø 7.5 – 12.5mm)

Advantages of the FastFix/FastConnect version:

- FastFix bracket and quick connector pre-assembled
- installation and electrical connection without opening the light fitting
- saves at least 60% mounting time



16117 0801	161 12L22 FF/FC	1	15	2.390	159	40	1 x 36W	2,7
16117 0803	161 15L34 FF/FC	1	21	3.440	164	40	1 x 58W	3,0
16117 0802	161 12L42 FF/FC	1	27	4.240	157	40	2 x 36W	2,7
16117 0804	161 15L60 FF/FC	1	39	6.160	158	40	2 x 58W	3,0

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Note:

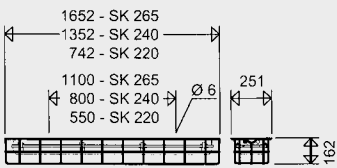
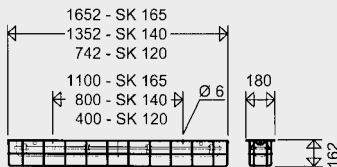
The FC version can be supplied together with various special versions. The maximum possible ambient temperature is 50 ° C.

FC is not available with the variants AUS (unprotected outdoor area) and LM (food industry) combinable.

Accessories / Spare Parts

Article no.	Type		Article no	Type	
spare glasses, PMMA frosted			spare glasses, PC frosted		
16111 9035	ABD 161 018 F	for 161 06..	16111 9036	ABD 161 018 F PC	for 161 06..
16111 9031	ABD 161 036 F	for 161 12..	16111 9033	ABD 161 036 F PC	for 161 12..
16111 9032	ABD 161 058 F	for 161 15..	16111 9034	ABD 161 058 F PC	for 161 15..
16211 9035	ABD 162 018 F	for 162 06..	16211 9030	ABD 162 018 F PC	for 162 06..
16211 9031	ABD 162 036 F	for 162 12..	16211 9033	ABD 162 036 F PC	for 162 12..
16211 9032	ABD 162 058 F	for 162 15..	16211 9034	ABD 162 058 F PC	for 162 15..
spare glasses LM-version 161...			spare glasses LM-version 162...		
16111 9017	ABD 161 018 LM	for 161 06..	16211 9018	ABD 162 036 LM	for 162 12..
16111 9018	ABD 161 036 LM	for 161 12..	16211 9019	ABD 162 058 LM	for 162 15..
16111 9019	ABD 161 058 LM	for 161 15..			
Wire guards, powder coated					
90004 0001	SK 120	for 161 06..	90004 0004	SK 220	for 162 06..
90004 0002	SK 140	for 161 12..	90004 0005	SK 240	for 162 12..
90004 0003	SK 165	for 161 15..	90004 0006	SK 265	for 162 15..
Fasteners					
90053 9008	KK/KKS FR VE10	plastic, incl. 2 safety clips (packing unit 10 pcs.)			
90055 9004	KE/KES VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.)			
90053 9004	KKS P	1 pair of safety clips (for LED version), plastic			
90055 9005	KES P	1 pair of safety clips (for LED version), stainless steel			
Cable entries/pressure compensation elements					
90063 9000	2511	blinking plug M20			
25610 9000	2561	plastic cable gland M20 x 1,5			
25600 9000	2560	plastic cable gland M25 x 1,5			
90259 9002	DAE20	pressure compensation element M20			
90259 9003	DAE 20/25	adapter gland M20 -> M25 with pressure compensation			
Pipe clamps					
90093 0002	183 RO 112 A P	2 pcs., 1 1/2" stainless steel, with support			
90094 0002	183 RO 2 A P	2 pcs., 2" stainless steel, with support			
Consider mounting distances when installing the light fittings by pipe clamps to pole outreaches or any brackets.					
Angle brackets, aluminium					
90045 9001	HW 30 P	pair of angle brackets 30°			
90045 9002	HW 45 P	pair of angle brackets 45°			
90045 9004	HW 60 P	pair of angle brackets 60°			
90045 9003	HW 90 P	pair of angle brackets 90°			
Accessories for ceiling mounting					
90049 0002	183 S	hook for chain suspension			
90095 0001	183 DS	stainless steel bracket with bolt M5			
Infrared remote control for SENS-light fittings					
90295 9000	FB SENSOTEC-Mini	Infrared remote control for 161 ..L.. SENS			

Protective guard



Pipe clamp R1 1/2" - Ø 48,3mm
R2" - Ø 60,3mm



Ceiling bracket 183 DS



Dustproof/Waterproof LED Light Fitting with Diffuser with variable setting of the luminous flux Series 161... VARIO

Applications:

Factories in which, for reasons of maximum standardization and economic storage, only one type of damp-proof luminaire is to be used, which can be used for a wide variety of lighting tasks due to its variably adjustable luminous flux. (For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Glass fibre reinforced polyester resin, silicone gasket.

Diffuser: Injection-molded acrylic glass,

frosted for glare limitation.

Closure: Three-part captive plastic clips (KK), incl. 2 safety clips (KKS) to ensure protection against contact.

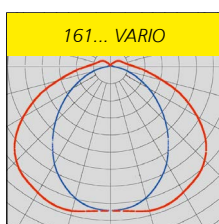
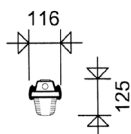
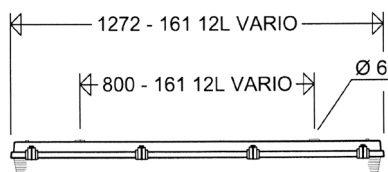
Reflector: Aluminium, painted can be suspended and carries the electrical components.

DIP switch for setting the luminous flux of the luminaire.

Connection: 3-pole terminal

Cable entries: 2 plugs M20.

Mounting: Closed knock-outs for direct ceiling mounting (to be opened on site). Sealing and pressure disks inside each fitting.



Technical data:

LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50.000h$ at 25°C ambient temperature, service life $L_{80} > 70.000h$ and $L_{70} > 100.000h$ at max. ambient temperature

ECG: 220-240V, 50/60Hz, overload and short-circuit protection

DIP switch for setting the luminous flux of the luminaire.

Ambient temperature: -20°C up to +35/40/45°C (see article table)

Options:

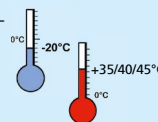
- 2,200K, 6.500K

- with through wiring system

- PC-diffuser frosted (PC)

Product highlights:

- universally usable due to variable setting of the luminous flux, depending on the requirement (replaces fluorescent lamps from 1x36W up to 2x58W)
- quick and easy adjustment on-site
- can be changed at any time (e.g. change of use of the premises with new requirements in regard to the level of illumination)
- robust, extremely strong quality light fitting especially suited for rough industrial use
- high-impact resistant housing, excellent chemical and UV-resistance
- highest efficiency due to use of top-quality ECGs and LED modules
- homogeneous illumination by using frosted diffusers, no particular light points visible, comfortable perception of light, brilliant glare limitation
- high colour reproduction CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- with Ψ -sign, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- for temperatures from -20°C up to +35/40/45°C (depending on setting)
- great versatility, thus economical storage due to standardization (only one light fitting instead of multiple versions)
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard



Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W]	Amb. temp. max. [°C]	Substitute for ca. *	(without packing material)
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161... VARIO



The luminous flux is variably adjustable to almost every value between 2.410lm and 5.920lm. Connected load and admis-

sible ambient temperature will change depending on the setting of the luminous flux.

16117 0399	161 12L VARIO	15	2.410	160	45	1 x 36W	2,7
		22	3.610 ²⁾	164	45	1 x 58W	
		29	4.510	156	40	2 x 36W	
		39	5.920	152	35	2 x 58W	

1) Examples of possible settings
2) Factory setting

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Notes:

The light fitting is not to be used in areas with high mechanical stress (wind) or seldom usage (i.e. maintenance and inspection only).

When mounting the light fittings on bracket poles or tubular beams/pipes always use original SCHUCH pipe clamps with support (see accessories).

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W]	Amb. temp. max. [°C]	Substitute for ca. *	(without packing material)
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161... VARIO AUS

for application in unprotected outdoor areas

Applications:

In protected and unprotected outdoor areas and industrial plants, mounted to walls, ceilings, catwalks and steel structures, pipe brackets, grating, under canopies, bus stops, train stations, subways, construction sites, etc.

Design:

As type 161/162... LED, but:

Diffuser: UV proof

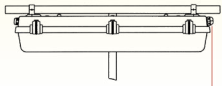
Pressure compensation element: M20

Entries: 1 gland M20 at one small side, pressure compensation element M20 at the other small side.

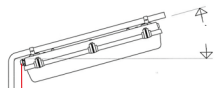
Mounting:

Ceiling and horizontal wall mount or mounting to outreaches, poles, steel structures, catwalks, etc. by means of pipe clamps. For vertical mounting please consult us.

pole mount with pipe clamps



pressure compensation element



pressure compensation element

16117 0359	161 12L VARIO AUS	15	2.410	160	45	1 x 36W	2,7
		22	3.610 ²⁾	164	45	1 x 58W	
		29	4.510	156	40	2 x 36W	
		39	5.920	152	35	2 x 58W	

1) Examples of possible settings
2) Factory setting

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Advantages of the AUS design:

- glass fibre reinforced polyester housing, durable resistant against UV-radiation and chemical components.
- our injection-molded PMMA-covers are extremely UV-resistant and robust (wall thickness 1.9mm)
- profile gaskets are UV-, ozone-, weather-, chemically resistant and non-aging
- pressure compensation element provides controlled venting and thus protects against condensation
- the fitting can be installed in canopied as well as in entirely open outdoor areas



Dustproof/Waterproof Light Fittings

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W]	Amb. temp. max. [°C]	Substitute for ca. *	(without packing material)
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161... VARIO LM



for application in food industry areas

Applications:

Food industry or food processing factories especially in risky areas of the food production or processing, suppliers to the food industry who are falling in the International Featured Standard Food, BRC or HACCP standards or who are subject to comparably strict requirements (e.g. production of food packaging).

Design:

Same as type 161 12L VARIO but:

Diffuser: Shatterproof, high chemical resistance, cover for glare limitation fixed to reflector.

Closure clips: Stainless steel (KE), incl. 2 safety clips (KES) to ensure protection against contact.

16119 0399	161 12L VARIO LM	15	2.410	160	45	1 x 36W	2,7
		22	3.610 ²⁾	164	45	1 x 58W	
		29	4.510	156	40	2 x 36W	
		39	5.920	152	35	2 x 58W	

1) Examples of possible settings
2) Factory setting

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Advantages of the LM version:

- shatterproof diffuser with very high impact resistance (16Nm!) even at a high continuous operating temperature
- resistant to grease and aggressive cleaning agents, disinfectants and solvents (we recommend the respective cleaning agents and disinfectants to be tested on their resistance (resistance index on request.)

IFS/BRC/VDMA/HACCP

SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.



Accessories / Spare Parts

Article No.	Type	
Spare diffuser		
16111 9031	ABD 161 036 F	cover, frosted PMMA diffuser, for 161 12 ...
16111 9033	ABD 161 036 F PC	cover, frosted PC diffuser, for 161 12 ...
16111 9018	ABD 161 036 LM	cover, diffuser high chemical resistant clear LM, for 161 12 ...

Additional accessories see series 161/162 ...

Extremely robust Dustproof/Waterproof LED-Light Fitting with Central Locking System Series 144 ...

Applications:

In humid, wet and dusty indoor areas and roofed outdoor areas with high mechanical strains as well as areas where any external clips are not wanted or where such clips could create problems. Hard to reach areas and areas with high downtime and maintenance cost when replacing the lamps, Food industry and food processing industry etc.

(For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Glass fibre reinforced polyester resin.

Diffuser: Polycarbonate, clear with internal prisms, hinged.

Gasket: Silicone.

Reflector: Aluminium painted, hinged and removable. Elements for glare limitation mounted to the reflector.

Central locking system: Operated by a hexagonal socket key 13mm.

Connection: 3-pole terminal.

Cable entries: 3 entries
M25 x 1,5 (2 glands and 2 screw plugs).

Looping the mains cable at one end of the housing up to 3 x 2,5mm² possible.

Mechanical installation: 2 suspension eyes with bolts (H8V P) or 2 ceiling brackets (15A P), see accessories.

Technical data:

LED: Linear modules 4,000K, CRI > 80, service life L90 > 50.000h at 25°C ambient temperature, service life L80 > 70.000h and L70 > 100.000h at max. ambient temperature

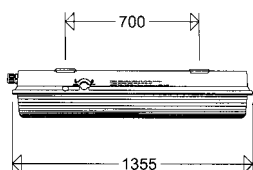
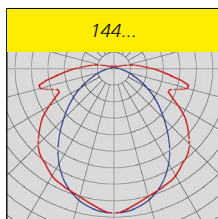
ECG: 220-240V, 50/60Hz, overload and short-circuit protection

Ambient temperature: -20°C up to ..°C see article table

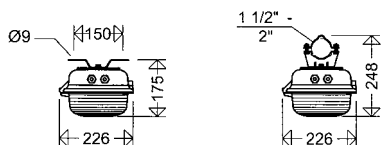
Options:

- 6.500K
- with dimming function via DALI2 interface, compatible with LIMAS Line (DIMD) Light Management System
- Corridor Mode (DIMC)
- with through wiring 2,5 sqmm
- for low ambient temperatures

- for connection to group or central battery systems (ZB) or emergency mains respectively
- emergency light version with self-contained battery

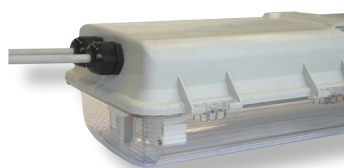
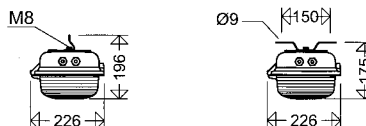


Pipe clamp mounting



Suspension eyes H8V

Ceiling brackets 15A

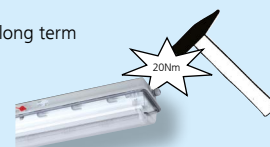


Looping the cable on one side:

All light fittings of series 144... have got 2 cable entries on one small side of the housing for cable looping instead of the through wiring system. This allowing a more economical cable looping at one end instead of the classical through wiring system (surcharge for 5-pole version).

Product highlights:

- extremely sturdy design of high mechanical and chemical resistance for a long term use in rough industrial areas:
 - housing of an impact resistance
 - polycarbonate diffuser of high-impact resistant
 - robust internal central locking system
 - highly resistant silicone gasket of dimensional stability for permanently safe tightness (IP66)
- highest efficiency due to use of top-quality ECGs and LED modules
- homogeneous illumination by using elements for glare limitation, no particular light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- with ∇ -sign, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- best suitable in the food industry and in the food processing industry especially in risky areas falling under the IFS standards (International Featured Standard Food)
- with adapter gland with pressure compensation prevents condensation water allowing an application in all unprotected outdoor areas (Versions AUS)
- easy to install and maintain:
 - time saving easy mechanical installation by means of eye bolts or ceiling brackets without opening the light fitting
 - time saving central locking system and hinged diffuser
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

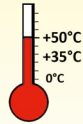


Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Amb. temp. max. [°C]	Substitute for ca. *	(without packing material)
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144 ..



14402 0001	144 12L22	14	2.300	164	50	1 x 36W	6,6
14402 0002	144 12L34	22	3.410	155	45	1 x 58W	6,6
14402 0003	144 12L42	29	4.280	148	40	2 x 36W	6,6
14402 0004	144 12L60	44	6.590	150	35	2 x 58W	6,6

Note:

This light fitting is not suitable for rare or occasional operation (e.g. maintenance and inspection lighting).

We recommend our series for use 107 ... G2 (PRIMO XR).

144 .. AUS



for application in unprotected outdoor areas

Applications:

Unprotected outdoor areas, especially in exposed areas with high mechanical stress (wind), catwalks, stairs, steel constructions, pipe brackets, on buildings, storage tank etc.

Design:

As standard type but with adapter gland with pressure compensation prevents condensation water.

Mounting:

Ceiling and horizontal wall mount or mounting to outreaches, poles, steel structures, catwalks, etc. by means of pipe clamps. When mounting the light fittings on bracket poles or tubular beams/pipes always use original SCHUCH pipe clamps with support.

14402 0011	144 12L22 AUS	14	2.300	164	50	1 x 36W	6,6
14402 0012	144 12L34 AUS	22	3.410	155	45	1 x 58W	6,6
14402 0013	144 12L42 AUS	29	4.280	148	40	2 x 36W	6,6
14402 0014	144 12L60 AUS	44	6.590	150	35	2 x 58W	6,6

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Mounting material

Suspension eyes with bolts H8V P



Ceiling brackets 15A P



Pipe clamps RO84...A P



Wall bracket W26/45 P



Further accessories such as carrier rail systems please see EX-installation material in this catalogue.



Accessories / Spare Parts

Article no.	Type	
Spare diffusers for series 144...		
84001 9004	ABD 8404 SIL	cover, diffuser PC clear Silicone, for e840 12 ..., nD844, 144 each from year of manufacture 2013/11
Cable glands/pressure compensation elements		
25600 9000	2560	ex-proof plastic cable gland M25 x 1,5
90118 9000	2538	ex-proof plastic plug M25 x 1,5
90259 9003	DAE20/25	adapter gland M20 -> M25 with pressure compensation
Mounting material		
90001 0002	H8V P	2 suspension eyes with bolts, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26/L P	2 wall mounting angles, sendzimizied
26000 0002	W 26/30 P	2 wall mounting angles 30°, sendzimizied
26000 0003	W 26/45 P	2 wall mounting angles 45°, sendzimizied

Dustproof/Waterproof LED Light Fitting with Diffuser Series 163/164 ... G2

Applications:

In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, cold stores, low temperature stores, cooling chambers and walkable low temperature cabins in hotels, hard to reach areas with high downtime and maintenance costs when replacing the lamps. (For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Glass fibre reinforced polyester resin, foamed gasket.

Diffuser: PMMA, modified for higher

impact resistance, frosted for glare limitation.

Closure: External plastic clips (KK) incl. 2 safety clips (KKS) to ensure protection against contact.

Reflector: Painted, removable complete with electronic components.

Electrical connection: 3-pole terminal block.

Cable entries: Variable, closed knock-outs on the short and long sides, and on the top, 2 blanking plugs M20.

Mounting system: 2 holes for ceiling mounting. Sealing and pressure disks for sealing are supplied inside the fitting.

Technical data:

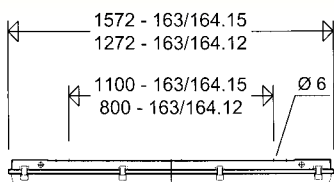
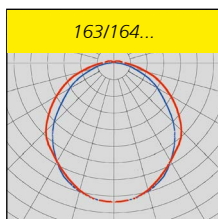
LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50.000h$ at 25°C ambient temperature, service life $L_{80} > 70.000h$ and $L_{70} > 100.000h$ at max. ambient temperature

ECG: 220-240V, 50/60Hz, overload and short-circuit protection

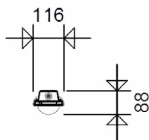
Ambient temperature: -20°C (-40°C for types ...T40) up to ..°C see article table

Options:

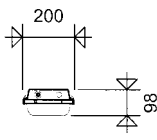
- polycarbonate diffuser stippled clear
- stainless steel clips (KE)
- 2,200K, 2,700K, 3,000K, 5,000K,
- with through wiring system
- 6.500K



163...



164...



Product highlights:

- highest efficiency due to use of top-quality ECG and LED modules
- homogeneous illumination by using frosted diffusers, comfortable perception of light and brilliant glare limitation
- high colour reproduction $R_a > 80$, according to the guide lines for workplaces, suitable for nearly all plant locations
- with Ψ -symbol, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max.[°C]	Substitute for ca. *	Weight [kg] without packing material
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163/164... G2



optimized for energy consumption (1 : 1 substitute fo fluorescent types)

16302 0016	163 12L22G2	1	17	2.470	145	40	1 x 36W	2,2
16302 0017	163 15L34G2	1	22	3.370	153	40	1 x 58W	2,4
16302 0018	163 12L42G2	1	28	4.160	149	40	2 x 36W	2,2
16302 0019	163 15L60G2	1	40	6.090	152	40	2 x 58W	2,4

with high luminous flux

16415 0016	164 12L90G2	2	58	8.990	155	40	2 x 80W	3,1
16415 0017	164 15L120G2	2	80	12.030	150	40	4 x 58W	3,8

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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163/164... G2 DIMD



dimnable via DALI interface

Design:

Same as standard version, but with DALI2-ECG and 2 additional clamping points, marked with DA, the polarity does not matter. Dimming level 1 -100%.

Compatible with LIMAS Line Light Management System.

Note:

The conducting wires to the control input must be mains voltage stable and can be integrated in the connection cable.

16302 0020	163 12L22G2 DIMD	1	15	2.320	155	40	1 x 36W	2,3
16302 0021	163 15L34G2 DIMD	1	21	3.330	159	40	1 x 58W	2,8
16302 0022	163 12L42G2 DIMD	1	27	4.110	152	40	2 x 36W	2,3
16302 0023	163 15L60G2 DIMD	1	39	5.970	153	40	2 x 58W	2,8
16415 0018	164 12L90G2 DIMD	2	58	8.990	155	40	2 x 80W	3,3
16415 0019	164 15L120G2 DIMD	2	80	12.030	150	40	4 x 58W	4,1

163/164 ... G2 DIMC



dimnable via Corridor Mode

Applications:

Areas where light fittings are controlled via motion detector or door contact, e.g. storage areas, shelf aisles. Areas with high energy-saving potential at times without presence of persons, e.g. car parks, warehouses, aisles etc.

Design:

Same as standard version, but with dimmable ECG and additional clamping point, marked with L'.

Note:

Such light fitting can be controlled by a light fitting of type 163 ... SENS.

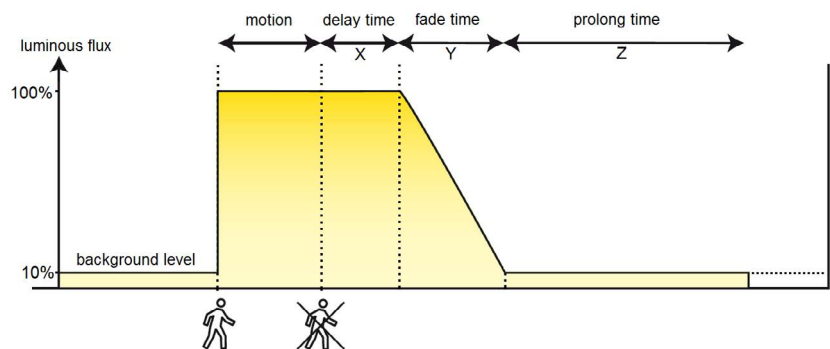


Technical data:

The Corridor Mode allows easy power reduction at a fixed value by means of an ordinary 230V control voltage.

Default settings:

- The Corridor Mode must be enabled during the installation of the light fittings. (s. mounting Instructions)
- 100% luminous flux as long as the control phase is active.
- Holding time of 100% luminous flux after switching off the control phase = 0 seconds. By setting the switch-off delay of the motion detector the customer can select an individual holding time
- Dimming ramp 30 seconds
- 10% luminous flux when no movement is detected (reduced operation).
- Automatic cutoff deactivated (light fitting never switches off and provides a background illumination of 10%, but can be switched off by user at any time).



16302 0024	163 12L22G2 DIMC	1	15	2.320	155	40	1 x 36W	2,3
16302 0025	163 15L34G2 DIMC	1	21	3.330	159	40	1 x 58W	2,8
16302 0026	163 12L42G2 DIMC	1	27	4.110	152	40	2 x 36W	2,3
16302 0027	163 15L60G2 DIMC	1	39	5.970	153	40	2 x 58W	2,8
16415 0020	164 12L90G2 DIMC	2	58	8.990	155	40	2 x 80W	3,3
16415 0021	164 15L120G2 DIMC	2	80	12.030	150	40	4 x 58W	4,1

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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163/164 ... G2 DIMC-Z30



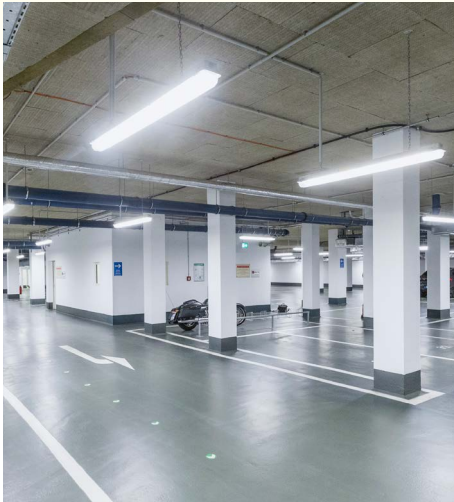
with Corridor Mode and automatic switch-off function

Design:

As DIMC version but with automatic switch-off after 30 minutes.

Note:

The light fittings can be controlled with a 161...SENS-Z30 type.



Default settings different from DIMC types:

- the Corridor Mode is activated at the factory
- automatic cutoff activated (10% background illumination for 30 minutes, then the light fitting is switched off [0%]).

16302 0120	163 12L22G2 DIMC-Z30	1	15	2.320	155	40	1 x 36W	2,3
16302 0121	163 15L34G2 DIMC-Z30	1	21	3.330	159	40	1 x 58W	2,8
16302 0122	163 12L42G2 DIMC-Z30	1	27	4.110	152	40	2 x 36W	2,3
16302 0123	163 15L60G2 DIMC-Z30	1	39	5.970	153	40	2 x 58W	2,8
16415 0030	164 12L90G2 DIMC-Z30	2	58	8.990	155	40	2 x 80W	3,3
16415 0031	164 15L120G2 DIMC-Z30	2	80	12.030	150	40	4 x 58W	4,1

163... G2 SENS



DIMC version with integrated motion detector

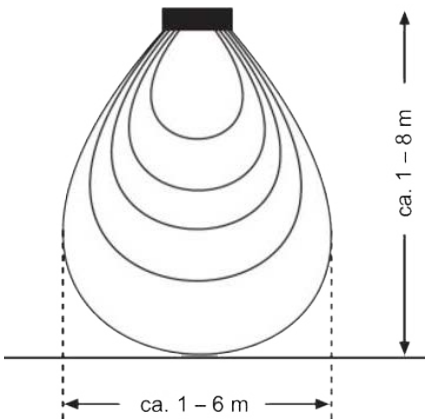
Applications:

Areas with high energy-saving potential in times without public access. Areas with high energy-saving potential at times without presence of persons, e.g. car parks, warehouses, aisles.

Design:

Same as standard version, but with dimmable ECG, integrated motion detector and additional clamping point, marked with 'L'. This light fitting (Master) controls all fittings of type 163... DIMC (Slaves), which are connected to the same circuit.

Detection range of sensor



Technical data:

- Detection range of sensor: Adjustable from 1 m - 6 m (depending on the environment); Default: Maximum
- Objects (partition walls made from steel, concrete beams, etc.) which absorb or reflect the radar waves affect the detection range of the sensor. This must be checked and taken into account in the planning
 - In general, the detection of radial movements (towards the HF sensor) is more reliable than the detection of tangential movements.
 - Tangential movements in a circular path are partially not detected.
 - Detection range max. 4m at light point heights of about 2.30m
 - Detection range max. 6m at light point heights up to max. 8m.
- Delay time: Adjustable from 10 sec to 30 min with Infrared remote control to 60 min; Default: 5 min
- Daylight control: Adjustable from 2 Lux; Default: Maximum
- Factory settings:
- Dimming ramp 30 seconds
 - 10% luminous flux when no movement is detected (reduced operation).
 - Automatic cutoff deactivated (light fitting never switches off and provides a background illumination of 10%, but can be switched off by user at any time).

Parameter setting:

- Potentiometer on the HF sensor
- Infrared remote control (optional)

16302 0030	163 12L22G2 SENS	1	15	2.320	155	40	1 x 36W	2,3
16302 0028	163 15L34G2 SENS	1	21	3.330	159	40	1 x 58W	2,5
16302 0031	163 12L42G2 SENS	1	27	4.110	152	40	2 x 36W	2,3
16302 0029	163 15L60G2 SENS	1	39	5.970	153	40	2 x 58W	2,5

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max.[°C]	Substitute for ca. *	Weight [kg] without packing material
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163... G2 SENS-Z30



DIMC version with integrated motion detector

Design:

As SENS version but with automatic switch-off after 30 minutes.

Default settings different from SENS types:

- the Corridor Mode is activated at the factory
- automatic cutoff activated (10% background illumination for 30 minutes, then the light fitting is switched off [0%]).

16302 0124	163 12L22G2 SENS-Z30	1	15	2.320	155	40	1 x 36W	2,3
16302 0125	163 15L34G2 SENS-Z30	1	21	3.330	159	40	1 x 58W	2,5
16302 0126	163 12L42G2 SENS-Z30	1	27	4.110	152	40	2 x 36W	2,3
16302 0127	163 15L60G2 SENS-Z30	1	39	5.970	153	40	2 x 58W	2,5

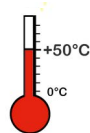
163... G2 H50



for high ambient temperatures up to +50°C

Applications:

Machine-oriented areas, areas with high process waste heat, areas close to the ceiling with accumulating heat etc.



16302 0040	163 12L22G2 H50	1	17	2.470	145	50	1 x 36W	2,3
16302 0041	163 15L34G2 H50	1	22	3.370	153	50	1 x 58W	2,4
16302 0042	163 12L42G2 H50	1	28	4.160	149	50	2 x 36W	2,3
16302 0043	163 15L60G2 H50	1	40	6.090	152	50	2 x 58W	2,4

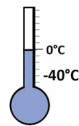
163... G2 T40



for ambient temperatures down to -40°C

Applications:

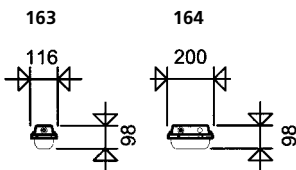
Cooling chambers, frozen food stock etc.



16302 0080	163 12L22G2 T40	1	15	2.320	155	40	1 x 36W	2,4
16302 0081	163 15L34G2 T40	1	21	3.330	159	40	1 x 58W	2,8
16302 0082	163 12L42G2 T40	1	27	4.110	152	40	2 x 36W	2,4
16302 0083	163 15L60G2 T40	1	39	5.970	153	40	2 x 58W	2,8

Notes:

The light fittings are not suitable for cleaning with cleaning agents or disinfectants as well as the cleaning with water-jet units.



163/164... IFS



for application in food industry areas

Applications:

Food industry or food processing factories, suppliers to the food industry who are falling in the International Featured Standard Food, BRC, HACCP or who are subject to comparably strict requirements.

Design:

Same as type 163/164... L...but:

Diffuser: cover Polycarbonate stippled clear.

Closure clips: Stainless steel (KE), incl. 2 safety clips (KES) to ensure protection against contact.

optimized for energy consumption (1 : 1 substitute for fluorescent types)

16319 0001	163 12L22 IFS	1	17	2.620	154	40	1 x 36W	2,2
16319 0002	163 15L34 IFS	1	22	3.570	162	40	1 x 58W	2,4
16319 0003	163 12L42 IFS	1	28	4.410	158	40	2 x 36W	2,2
16319 0004	163 15L60 IFS	1	40	6.460	162	40	2 x 58W	2,4

with high luminous flux

16419 0001	164 12L90 IFS	2	58	9.530	164	40	2 x 80W	3,1
16419 0002	164 15L120 IFS	2	80	12.750	159	40	4 x 58W	3,8

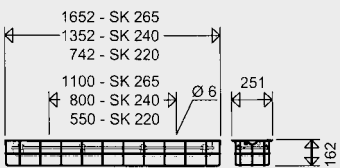
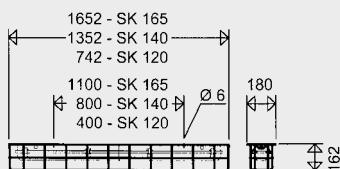
* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



IFS/BRC/VDMA/HACCP

SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.

Protective guard



Pipe clamp R1 1/2" - Ø 48,3mm
R2" - Ø 60,3mm



Ceiling bracket 183 DS



Accessories / Spare Parts

Article no.	Type		Article no.	Type	
Spare glasses, PMMA, frosted			Spare glasses, PC, stippled clear		
16711 9001	ABD 163 036 F G2	for 163 12L.. G2	16311 9004	ABD 163 036 PC	for 163 12L.. IFS
16711 9002	ABD 163 058 F G2	for 163 15L.. G2	16311 9005	ABD 163 058 PC	for 163 15L.. IFS
16411 9008	ABD 164 036 F G2	for 164 12L.. G2	16411 9004	ABD 164 036 PC	for 164 12L.. IFS
16411 9009	ABD 164 058 F G2	for 164 15L.. G2	16411 9005	ABD 164 058 PC	for 164 15L.. IFS
16311 9006	ABD 163 036 F	for 163 12L...			
16311 9007	ABD 163 058 F	for 163 15L...			
16411 9006	ABD 164 036 F	for 164 12L...			
16411 9007	ABD 164 058 F	for 164 15L...			
Fasteners					
90123 9007	163 KK/KKS V08	plastic, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9006	163 KE/KES V08	stainless steel, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9004	163 KKS P	1 pair of safety clips (for LED version), plastic			
90123 9005	163 KES P	1 pair of safety clips (for LED version), stainless steel			
Cable entries					
90063 9000	2511	blinking plug M20			
25610 9000	2561	plastic cable gland M20 x 1,5			
25600 9000	2560	plastic cable gland M25 x 1,5			
Protective guard, powder coated					
90004 0002	SK 140	for 163 12...			
90004 0003	SK 165	for 163 15...			
90004 0005	SK 240	for 164 12...			
90004 0006	SK 265	for 164 15...			
Pipe clamps					
90245 0003	163 RO 112A P	1 1/2", stainless steel, with support (pair) for 163...			
90245 0004	163 RO 2A P	2", stainless steel, with support (pair) for 163...			
90245 0005	164 RO 112A P	1 1/2", stainless steel, with support (pair) for 164...			
90245 0006	164 RO 2A P	2", stainless steel, with support (pair) for 164...			
Attention: Observe the fixing distance when mounting on boom with pipe clamps (boom length!)					
Accessories for ceiling mounting					
90049 0002	183 S	swing hook for chain suspension			
90095 0001	183 DS	stainless steel bracket, with screw M5			
Infrared remote control for SENS-light fittings					
90295 9000	FB SENSOTEC-Mini	Infrared remote control for 163 .. SENS			



Dustproof/Waterproof Light Fitting with Diffuser for LED Retrofit-Lamps

Series 161/162... RLED OV

163/164... RLED OV

Application:

In humid, wet and dusty indoor areas of industrial premises, for workshops and car parks, basements etc.

Design:

Without ballast.

Housing: Glass fibre reinforced polyester resin, foamed polyurethane gasket.

Diffuser: Injected, clear acrylic glass with internal prisms. (161/162) or stippled clear (163/164).

Gasket: polyurethane foam

Closure: Three-part captive plastic clips

Reflector: Glass fibre reinforced polyester (161/162) or Sheet Steel 163/164).

Connection: 3-pole terminal block with integrated fuse for switch-off in case of Lamp fail.

Cable entries: 2 plugs M20.

Mounting: Closed knock-outs for direct ceiling mounting (to be opened at site). Sealing and pressure disks inside each fitting.

Options:

– polycarbonate diffuser stippled clear

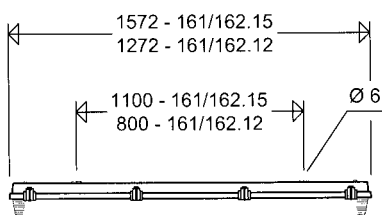
– Diffuser Polycarbonat (PC)

– Diffuser frosted

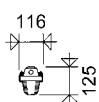
– silicone gasket

Note:

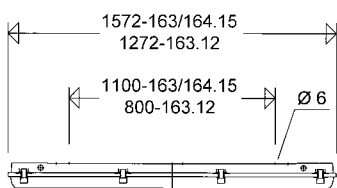
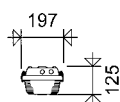
Not suitable for retrofit lamps that are designed for use in ECG luminaires. Operate IEC 62776 certified lamps only that are released by the manufacturer to operate at mains voltage.



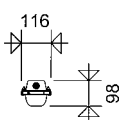
161...



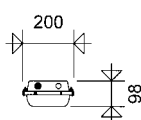
162...



163...

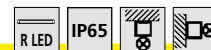


164...



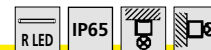
Article no.	Type	Lamps	Length [m]	Protection class	Weight [kg] without packaging material
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161/162... RLED OV



16117 0106	161 1/12 RLED OV	1 x LED-Retrofit	1,2		3,9
16117 0107	161 1/15 RLED OV	1 x LED-Retrofit	1,5		3,0
16215 0106	162 2/12 RLED OV	2 x LED-Retrofit	1,2		3,9
16215 0107	162 2/15 RLED OV	2 x LED-Retrofit	1,5		4,7

163/164... RLED OV



16302 0208	163 1/12 RLED OV	1 x LED-Retrofit	1,2		1,8
16302 0209	163 1/15 RLED OV	1 x LED-Retrofit	1,5		2,2
16415 0209	164 2/15 RLED OV	2 x LED-Retrofit	1,5		3,5

Accessories and spare parts please see section „Dustproof/Waterproof Light Fitting with Diffuser Series 161/162..., 163/164...“ in our catalogue.

LUXANO 2

Dustproof/Waterproof LED Light Fitting with Diffuser Series 167 ... G2 / 167... G2 VARIO

Applications:

In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks etc.

(For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Applications:

Housing: Glass fibre reinforced polyester resin, foamed polyurethane gasket.

Diffuser: PMMA, frosted for glare limitation.

Closures: stainless steel, in order to

ensure the protection against contact.

The light fitting can be opened with a tool only.

Reflector: Painted, removable, completed with electronic components.

Electrical connection: 3-pole terminal block.

Cable entries: Variable, closed knock-outs on the short and long sides and on the backside, 2 blanking plugs M20.

Mounting system: 2 retaining clips made of stainless steel, 2 bracket for chain suspension (part of the delivery)

VARIO versions with variable setting of the luminous flux

Applications:

Factories in which, for reasons of maximum standardization and economic storage, only one type of damp-proof luminaire is to be used, which can be used for a wide variety of lighting tasks due to its variably adjustable luminous flux.

Design:

As standard version but with DIP switch for setting the luminous flux without tools. The luminaire luminous flux can be set to four values. Depending on the set luminous flux, the power consumption of the light fitting and the maximum permissible ambient temperature change.

Technical data:

LED: Linear modules 4,000K, CRI > 80, service life $L_{80} > 50,000h$ at max. ambient temperature, CRI > 80,

Type HE CS / HE VARIO / L100 / LW / ER DIMD / T40/50

LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50,000h$ at 25°C ambient temperature, service life $L_{80} > 70,000h$ and $L_{70} > 100,000h$ at max. ambient temperature

ECCG: 220-240V, 50/60Hz

Ambient temperature: -20°C up to see article table

Options:

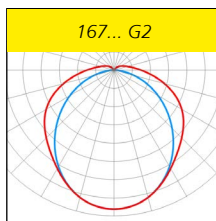
- 2,200K, 2,700K, 3,000K, 5,000K,

6,500K

- through wiring

- quick-connector „Fast Connect“ (FC)

- cable looping (RR)



Product highlights of the VARIO version:

- universally usable due to variable setting of the luminous flux, depending on the requirement
- simple and quick adjustment on-site without tools
- can be changed at any time (e.g. change of use of the premises with new requirements in regard to the level of illumination)
- great versatility, thus economical storage due to standardization (only one light fitting instead of multiple versions)

General product highlights of the LUXANO 2 series:

- homogeneous illumination by using frosted diffusers, no individual light spots visible, comfortable perception of light and excellent glare limitation
- high colour reproduction CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- ∇ -symbol, suitable for rooms with increased fire risk
- closures made of stainless steel
- variable cable entries, closed knock-outs on the short and long sides, and on the backside
- FastFix quick mounting system, with retaining clips made of stainless steel for variable mounting distances, without opening the fitting.
- sustainable, control gear and LED-module replaceable by qualified personnel on-site

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm ¹⁾	Luminous efficacy [lm/W]	Tmax [°C]	Substitute for *	Weight [kg] without packing material
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NEW

167... G2 / ... G2 VARIO



16700 0020	167 12LG2 VARIO	1	18	2.700	150	35	> 1 x 36W	1,7
			21	3.100	148	35	< 1 x 58W	
			26	3.800	146	35	> 1 x 58W	
			30	4.300 ²⁾	143	35	2 x 36W	
16700 0021	167 15LG2 VARIO	1	25	3.800	152	35	> 1 x 58W	1,9
			29	4.400	152	35	2 x 36W	
			36	5.400	150	35	< 2 x 58W	
			43	6.200 ²⁾	144	35	2 x 58W	
16700 0015	167 15L100G2	1	70	10.690	153	35	3 x 58W	2,0

167... G2 HE VARIO



highly efficient design for reduced energy consumption

The luminaire luminous flux can be set to four values. Depending on the set luminous flux, the power consumption of the light fitting and the maximum permissible ambient temperature change.

16704 0001	167 12LG2 HE VARIO	1	20	3.240 ²⁾	162	40	1 x 58W	1,7
			25	4.020	161	40	>1 x 58W	
			29	4.620	159	40	2 x 36W	
			34	5.280	155	35	>2 x 36W	
16704 0002	167 15LG2 HE VARIO	1	25	4.050	162	40	>1 x 58W	2,0
			31	4.960	160	40	2 x 36W	
			36	5.810 ²⁾	161	40	2 x 58W	
			43	6.660	155	35	>2 x 58W	

NEW

167... G2 AUS / ... G2 VARIO AUS



Notes:

- In case of horizontal installation, the light fitting must be fixed directly with screws (washer and pressure disk are included) or it must be mounted with reinforced retaining clips (see accessories)!
- The light fitting is not to be used in areas with high mechanical stress (wind) or seldom usage (i.e. maintenance and inspection only).
- We recommend our series 144... in AUS-version or a weather roof within very critical environmental conditions.

for application in unprotected outdoor areas

Applications:

In protected and unprotected outdoor areas, mounted to walls, ceilings, catwalks, under canopies, bus stops, train stations, subways, construction sites, etc.

Design:

As type 167... G2, but:

Diffuser: UV proof

Gasket: silicone

Pressure compensation element: M20

Entries: 1 gland M20 at one small side, pressure compensation element M20 at the other small side.

Mounting system: 2 reinforced retaining clips (also suitable for horizontal wall mounting) made of stainless steel (part of the delivery)

16701 0030	167 12LG2 VARIO AUS	1	18	2.700	150	35	> 1 x 36W	1,7
			21	3.100	148	35	< 1 x 58W	
			26	3.800	146	35	> 1 x 58W	
			30	4.300 ²⁾	143	35	2 x 36W	
16701 0031	167 15LG2 VARIO AUS	1	25	3.800	152	35	> 1 x 58W	1,9
			29	4.400	152	35	2 x 36W	
			36	5.400	150	35	< 2 x 58W	
			43	6.200 ²⁾	144	35	2 x 58W	
16701 0020	167 15L100G2 AUS	1	70	10.690	153	35	3 x 58W	2,0

1) possible setting range

2) Factory setting

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W]	Tmax [°C]	Substitute for *	Weight [kg] without packing material
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NEW

167... G2 IFS / ... G2 VARIO IFS



Notes:

The light fittings in Version IFS are not suitable for cleaning with cleaning agents or disinfectants as well as the cleaning with water-jet units.

for application in food industry areas

Applications:

Food industry or food processing factories, suppliers to the food industry who are falling in the International Featured Standard Food, BRC, HACCP or who are subject to comparably strict requirements.

Design:

Same as type 167... G2 but:
Diffuser: cover Polycarbonate, frosted.

16719 0020	167 12LG2 VARIO IFS	1	18	2.700	150	35	> 1 x 36W	1,7
			21	3.100	148	35	< 1 x 58W	
			26	3.800	146	35	> 1 x 58W	
			30	4.300 ²⁾	143	35	2 x 36W	
16719 0021	167 15LG2 VARIO IFS	1	25	3.800	152	35	> 1 x 58W	1,9
			29	4.400	152	35	2 x 36W	
			36	5.400	150	35	< 2 x 58W	
			43	6.200 ²⁾	144	35	2 x 58W	
16719 0015	167 15L100G2 IFS	1	70	10.690	153	35	3 x 58W	2,0

1) possible setting range
2) Factory setting

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

167... G2 DIMD



dimmable via DALI interface

Design:

Same as standard version, but with DALI2-ECG and 2 additional clamping points, marked with DA, the polarity does not matter. Dimming level 1 -100%.
Compatible with LIMAS Line Light Management System.

Note:

The lines to the control inputs must be mains voltage-proof and can be carried along in the connecting cable.

16700 0032	167 15L34G2 DIMD	1	28	3.850	138	35	1 x 58W	2,0
16700 0033	167 12L42G2 DIMD	1	30	4.100	137	35	2 x 36W	1,7
16700 0034	167 15L60G2 DIMD	1	43	6.000	140	35	2 x 58W	2,0
16700 0035	167 15L100G2 DIMD	1	70	10.690	153	35	3 x 58W	2,2

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Dustproof/Waterproof Light Fittings

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm ¹⁾	Luminous efficacy [lm/W]	Tmax [°C]	Substitute for *	Weight [kg] without packing material
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167... G2 DIMC



with Corridor Mode

Applications:

Areas where light fittings are controlled via motion detector or door contact, e.g. storage areas, shelf aisles. Areas with high energy-saving potential at times without presence of persons, e.g. car parks, warehouses, aisles, cold stores etc.

Design:

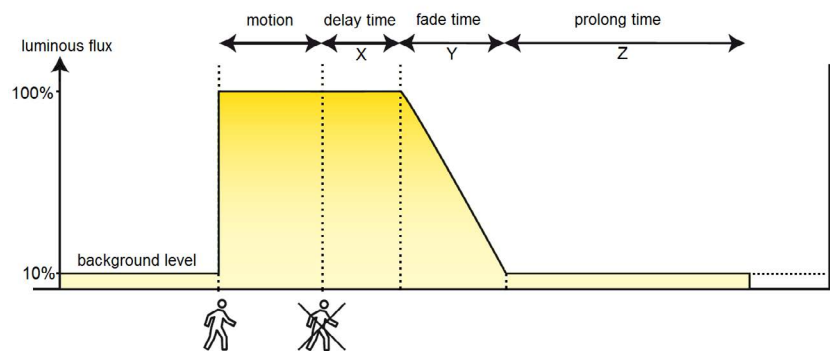
Same as standard version, but with dimmable ECG and additional clamping point, marked with L'.

Technical data:

The Corridor Mode allows easy power reduction at a fixed value by means of an ordinary 230V control voltage.

Default settings:

- 100% luminous flux as long as the control phase is active.
- holding time of 100% luminous flux after switching off the control phase = 0 seconds. By setting the switch-off delay of the motion detector the customer can select an individual holding time
- dimming ramp 30 seconds
- 10% luminous flux when no movement is detected (reduced operation).
- automatic cutoff deactivated (light fitting never switches off and provides a background illumination of 10%, but can be switched off by user at any time).



16700 0036	167 15L34G2 DIMC	1	28	3.850	138	35	1 x 58W	2,0
16700 0037	167 12L42G2 DIMC	1	30	4.100	137	35	2 x 36W	1,7
16700 0038	167 15L60G2 DIMC	1	43	6.000	140	35	2 x 58W	2,0
16700 0039	167 15L100G2 DIMC	1	70	10.690	153	35	3 x 58W	2,2

167... G2 DIMC-Z30



with Corridor Mode and automatic switch-off function

Design:

As DIMC version but with automatic switch-off after 30 minutes.

Default settings different from DIMC types:

- automatic cutoff activated (10% background illumination for 30 minutes, then the light fitting is switched off [0%]).

16700 0066	167 15L34G2 DIMC-Z30	1	28	3.850	138	35	1 x 58W	2,0
16700 0067	167 12L42G2 DIMC-Z30	1	30	4.100	137	35	2 x 36W	1,7
16700 0068	167 15L60G2 DIMC-Z30	1	43	6.000	140	35	2 x 58W	2,0
16700 0089	167 15L100G2 DIMC-Z30	1	70	10.690	153	35	3 x 58W	2,2

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm ¹⁾	Luminous efficacy [lm/W]	Tmax [°C]	Substitute for *	Weight [kg] without packing material
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NEW

167... G2 HE CS



with smart LIMAS Air light control via radio

Applications:

Areas where no DALI lines are available or planned, but the luminaires are to be controlled intelligently.

Design:

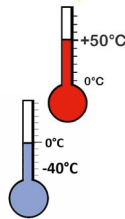
As standard version, but with CASAMBI®-enabled control gear for smart lighting control.

Explanations on smart light control as well as further system components (sensors / switches / pushbuttons etc.) can be found in the catalog section „Light Management - LIMAS Air“.

Product highlights:

- each individual luminaire separately controllable
- compatible with all LIMAS Air system components
- convenient configuration and control via Bluetooth using free smartphone app (Android and iOS)
- no gateway and no internet connection required
- extensive portfolio of sensors and actuators
- high-efficiency design (HE) for reduced energy consumption
- significant reduction of operating costs and CO₂ reduction

16700 0090	167 12L42G2 HE CS	1	27	4.100	152	40	2 x 36W	1,7
16700 0091	167 15L60G2 HE CS	1	39	6.000	154	40	2 x 58W	2,0



NEW

167... T40 / H50



for wide temperature ranges from -40°C up to +50°C

16700 0082	167 15L34G2 T40 H50	1	25	3.710	148	50	1 x 58W	2,0
16700 0083	167 12L42G2 T40 H50	1	27	4.100	152	50	2 x 36W	1,7
16700 0084	167 15L60G2 T40 H50	1	39	6.000	154	50	2 x 58W	2,0



167... G2 LW



for application in stables and agriculture farming

Applications:

Pigsties with increased ammonia exposure, dairy cattle, cattle and horse barns.
Damp, wet and dusty rooms in agricultural premises as well as rooms with increased fire risk due to combustible dusts, e.g. barns, straw and feed storage.

Design:

Same as type 167... G2 but with corrosion-proof and highly ammonia-resistant components.

Gasket: silicone

Cable entries: 1 gland M20 at one small side, blanking plug M20 at the other small side.

Mounting system: 2 reinforced retaining clips (also suitable for horizontal wall mounting), made of stainless steel, 2 brackets for chain suspension (part of the delivery).

Product highlights:

- permanently ammonia-resistant design
- corrosion-proof encapsulated electronic ballast
- highly resistant LED Modules with additional protective coating
- closures made of stainless steel
- ⚡-symbol, suitable for rooms with increased fire risk
- extremely efficient up to 174 lm/W
- none-flickering light to avoid stress and to ensure animal welfare
- DLG (German Agricultural Society) exam



16702 0013	167 12L42G2 LW	1	23	4.000	174	35	1 x 58W	1,7
16702 0014	167 15L60G2 LW	1	37	6.140	166	35	2 x 58W	2,0

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

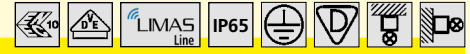
Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm ¹⁾	Luminous efficacy [lm/W]	Tmax [°C]	Substitute for *	Weight [kg] without packing material
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Note:

The light fitting 167 ... G2 ER DIMD is not suitable for use in pig stalls! We recommend using our 107... PRIMO XR LW DIMD series.



167... G2 ER DIMD



for application in stables and agriculture farming

Applications:

In poultry farming in accordance with the German Animal Welfare (TierSCHNutzTV), dairy cattle, cattle and horse stables.
Damp, wet and dusty rooms in agricultural premises as well as rooms with increased fire risk due to combustible dusts, e.g. barns, straw and feed stores.

Design:

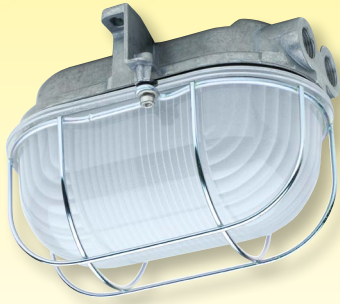
Like version 167 ... G2 LW but with DALI2-ECG (not encapsulated in a corrosion-proof manner) and 2 additional terminal points, labeled „DA“, polarity is irrelevant. Dimming level 1-100%.
Compatible with LIMAS Line Light Management System.
Note: The lines to the control inputs must be mains voltage-proof and can be carried along in the connecting cable.

16702 0023	167 12L42G2 ER DIMD	1	24	4.170	174	35	2 x 36W	1,7
16702 0024	167 15L60G2 ER DIMD	1	37	6.140	166	35	2 x 58W	2,0

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Accessories / Spare Parts

Article no.	Type	
spare glasses, PMMA, frosted		
16711 9003	ABD 167 12 G2	cover, frosted PMMA diffuser, for 167 12 ... G2
16711 9004	ABD 167 15 G2	cover, frosted PMMA diffuser, for 167 15 ... G2
16711 9005	ABD 167 12 G2 PC	cover, frosted PC diffuser, for 167 12 ... G2
16711 9006	ABD 167 15 G2 PC	cover, frosted PC diffuser, for 167 15... G2
Fasteners		
90123 9008	167G2 KE V10	stainless steel (packing unit 10)
Cable entries/pressure compensation elements		
90063 9000	2511	blanking plug M20
25610 9000	2561	plastic cable gland M20 x 1,5
90259 9002	DAE20	pressure compensation element M20 for ... AUS
Accessories		
90049 0004	167 VBC P	retaining clips, reinforced for horizontal wall mount (1 pair)



LED Oval-Shaped Light Fitting Series 3610...

Applications:

Humid, wet and dusty interior areas, in areas with extreme operating conditions, for small spacing, areas that are difficult to access, purpose of signalization with coloured LED etc.

(For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Cast aluminium, unpainted.

Wire guard: Steel, passivated.

Glass bowl: Silicate, frosted with internal prism structure, silicone gasket.

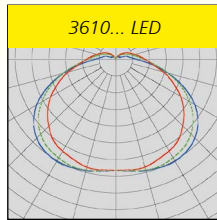
Reflector: Aluminium painted, with LED-Linear modules.

Connection: 2-pole. Earthing by separate screw at the enclosure.

Cable entries: 2 x M20 x 1.5.

Mounting system: 2 integral fixing lugs

Note: Cable glands are not included in the scope of delivery. Please order separately (See accessories).



Technical Data:

LED: Linear modules 4,000K, CRI > 80, service life L_{80} > 100.000h at 25°C ambient temperature, service life L_{80} > 90.000h at max. ambient temperature

ECCG: 220-240V, 50/60Hz, overload and short circuit protection.

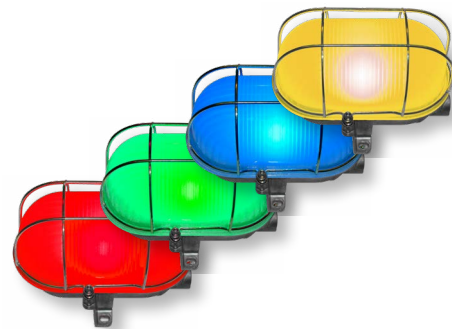
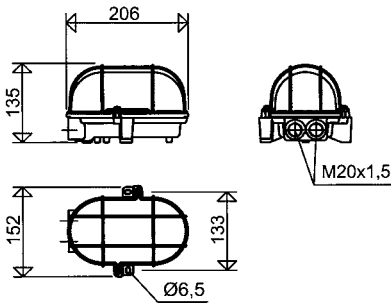
Ambient temperature: -20°C up to +35°C

Options:

– coloured LED for signalling application

Product highlights:

- robust light fitting for rough environment
- ideal for small spacing
- homogeneous illumination by using frosted diffusers, comfortable perception of light (3610 L..)
- with ∇ -sign, suitable for rooms with increased fire risk (3610 L..)
- quick mounting with outer fixing points
- sustainable, control gear and LED-module replaceable by qualified personnel on-site (3610 L..)



3610 L.. with coloured LED for signalling application

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Substitute for *	Weight [kg] without packing material
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3610 L..



36102 0031	3610 L04	5,0	550	110	1 x 40W	1,2
36102 0032	3610 L10	9,5	960	101	1 x 75W	1,2

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

3610



Design:

like LED type but without reflector

Glass bowl: clear, with internal prism with lamp socket: E27

Technical Data:

ECCG: 230V, 50/60Hz

Ambient temperature: -20°C up to +25°C

36100 0007	3610	for LED-lamps E27/A60, max. 10,5W	1,2
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Accessories / Spare Parts

Article No.	Type	
90075 9002	ABD 3610 F	cover, frosted spare glass, for 3610...
90075 9000	ABD 3610	cover, spare glass clear, for 3610...
36101 9000	SK 3610	spare wire guard
59600 9001	596 SIL	spare gasket
Cable glands M20 x 1,5		
25610 9000	2561	plastic gland M20 x 1.5
25730 9000	2573	plastic threaded blanking plug M20 x 1.5

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Compact LED Fitting Series 3611 ...



Applications:

Humid, wet and dusty locations, corridors, staircases, under canopies and balconies, areas with rough conditions of operation, constricted space, almost inaccessible locations, runways, cable channels, stair towers, walkable low temperature booths (For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Die-cast aluminium, painted in white, all operating components located inside the housing and wired ready for connection.
Diffuser: PC satined, foamed silicone gasket.
Connection terminal: 3-poles.
Cable entry: 1 plug M20 at the front side.
Mounting: 2 outer fixing points.

Note:

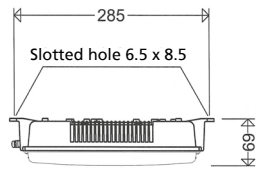
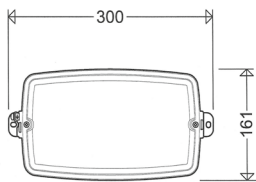
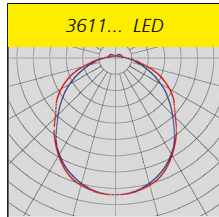
This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

Technical data:

LED: Linear modules 4,000K, CRI > 80, service life $L_{80} > 60.000h$ at 25°C ambient temperature, service life $L_{80} > 50.000h$ at max. ambient temperature
ECG: 220-240V, 50/60Hz, overload and short circuit protection.
Ambient temperatures: -20°C up to +30°C

Options:

- for connection to 24V supply
- coloured LED for signaling application
- cable looping system on one side (RR)
- for outdoor installation (AUS)
- for higher ambient temperatures
- vibration-resistant version (RF)



Product highlights:

- robust light fitting for rough environment
- best suitable in the food industry and in the food processing industry especially in risky areas falling under the IFS standards (International Featured Standard Food)
- ideal for small spacing
- homogeneous illumination by using frosted diffusers, comfortable perception of light
- with Ψ -sign, suitable for rooms with increased fire risk
- quick mounting with outer fixing points
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Substitute for *	Weight [kg] without packing material
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3611...



36110 0006	3611 L05	6,0	660	110	1 x 8W	0,9
36110 0007	3611 L10	10,0	1.180	118	1 x 18W	0,9

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Accessories / Spare Parts

Article No.	Type	
36004 9003	ABD 3611 F	cover, frosted PC diffuser, for 3611...



Compact Dustproof/Waterproof LED-Light Fitting Series 164KL... G2

Applications:

Humid, wet and dusty interior areas, walkable low temperature cabins, restaurants, supermarkets, hotels etc., above doors, entrances and exits, roofed outdoor areas etc.

(For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Glass fibre reinforced polyester, foamed silicone gasket.

Diffuser: PMMA frosted for glare limitation.

Clips: Single-piece plastic clips (KK).

Reflector: Aluminium painted, detachable, carrying the electrical components.

Connection terminal: 3 poles

Cable entries: Variable, at the ends and top of the housing, 2 plugs M20.

Mounting system: 2 holes for ceiling mounting. Sealing and pressure disks are supplied inside the fitting.

Technical data:

LED: Linear modules, 4.000K, CRI > 80, service life $L_{80} > 50,000$ h at max. ambient temperature

ECG: 220-240V, 50/60Hz, overload and short circuit protection.

Ambient temperature: -20°C up to +30°C

Options:

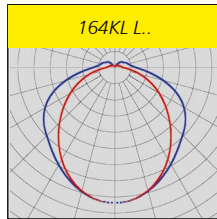
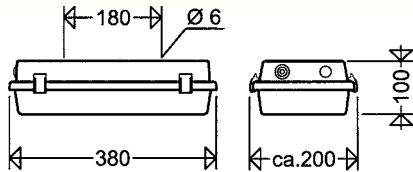
– for connection to 24V DC-supply

(Type 164KL L08G2)

– stainless steel clips (KE)

– cable looping at 1 small side (RR)

– purpose of signalization with coloured LED



Product highlights:

- homogeneous illumination by using frosted diffusers, comfortable perception of light and brilliant glare limitation
- high colour reproduction CRI > 80, according to the guide lines for workplaces suitable for nearly all plant locations
- with ∇ -symbol, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Substitute for *	Weight [kg] without packing material
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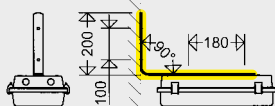
164KL...



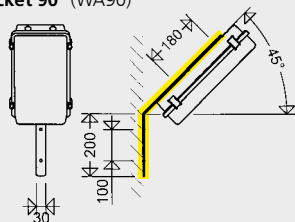
16407 0031	164KL L05G2	4,5	490	109	1 x 8W	1,0
16407 0032	164KL L08G2	8,5	840	99	1 x 11W	1,0
16407 0033	164KL L11G2	10,0	1.150	115	1 x 18W	1,0
16407 0034	164KL L15G2	14,0	1.490	106	1 x 24W	1,0

*The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

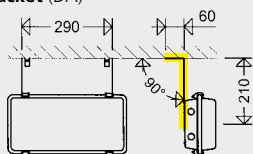
Wall bracket 45° (WA45)



Wall bracket 90° (WA90)



Ceiling bracket (DA)



Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Accessories / Spare Parts

Article no.	Type	
Spare glasses PMMA frosted		
16413 9007	ABD 164KL F G2	cover, frosted PMMA diffuser, for 164KL... G2
Cable entries		
90063 9000	2511	blanking plug M20
25610 9000	2561	plastic cable gland M20 x 1,5
25600 9000	2560	plastic cable gland M25 x 1,5
Mounting brackets		
90232 0012	WA 45 ALU	wall bracket 45°
90232 0013	WA 90 ALU	wall bracket 90°
90232 0004	DA	1 pair of ceiling/wall bracket 90°
Fasteners		
90123 9003	163 KK VE08	plastic (packing unit 8)
90123 9002	163 KE VE08	stainless steel (packing unit 8)



Small High Impact Resistant Dust-/Waterproof LED-Light Fittings with Diffusers Series 130/131 ..

Applications:

Humid, wet and dusty interior areas, corridors, staircases, under canopies and balconies, walkable low temperature cabins, restaurants, supermarkets, hotels, areas which are difficult to access etc. (For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Polycarbonate, white, silicone gasket.

Diffuser: Polycarbonate frosted, at one side with multiple hinge for suspending and unhinging the diffuser, captive

stainless steel screw on the other side for closing the fitting.

Reflector: Aluminium painted, with LED and all electrical components, ready wired for installation.

Connection: Via 3-pole terminal.

Cable entry:

Series 130...: 1 grommet M16 at the locking side.

Series 131...: 1 grommet M20 at each front side.

Mounting: 2 borings serve for direct ceiling mounting. Sealing and pressure disks included.

Technical data:

LED: Highpower LED, 4.000K, CRI > 80, service life $L_{80} > 50,000$ h at max. ambient temperature

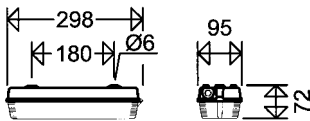
ECG: 220-240V, 50/60Hz, overload and short circuit protection.

Ambient temperature: -20°C up to +30°C

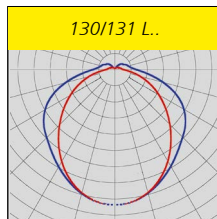
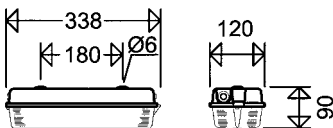
Options:

- for connection to 24V DC supply (types 130/131 L07)
- cable entry in the back of the housing (series 130...)
- cable looping at 1 small side (131... RR)
- for higher/lower ambient temperatures
- for wide temperature ranges (T/H)
- purpose of signalization with coloured LED

Series 130...



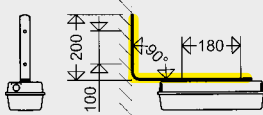
Series 131...



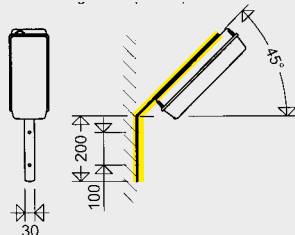
Product highlights:

- solid cover with high wall thickness also at the critical areas (corners)
- best suitable in the food industry and in the food processing industry especially in risky areas falling under the IFS standards (International Featured Standard Food)
- ideal for small spacing
- homogeneous illumination by using frosted diffusers comfortable perception of light
- high colour reproduction CRI > 80, according to the guide lines for workplaces suitable for nearly all plant locations
- with ∇ -symbol, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

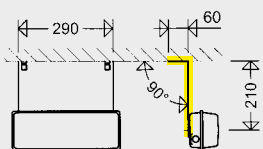
Wall bracket 90° (WA90)



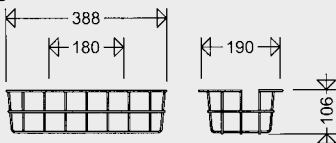
Wall bracket 45° (WA45)



Ceiling bracket (DA)



Wire guard 130/131...



Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Substitute for *	Weight [kg] without packing material
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130/131 ..

13003 0051	130 L07	8,0	750	94	1 x 11W	0,4
13101 0001	131 L04	4,0	460	115	1 x 8W	0,5
13101 0002	131 L07	8,0	780	98	1 x 11W	0,5
13101 0003	131 L10	10,0	1.050	105	1 x 18W	0,5
13101 0004	131 L13	13,0	1.370	105	2 x 11W	0,5

*The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Accessories / Spare Parts

Article no.	Type	
13011 9007	ABD 130 F	cover, frosted PC diffuser, for 130...
13111 9006	ABD 131 F	cover, frosted PC diffuser, for 131...
90062 9000	2510	spare-grommet, M16 (for 130...)
90063 9000	2511	spare-grommet, M20 (for 131...)
25610 9000	2561	plastic cable gland, M20 x 1,5 (for 131...)
90004 0009	SK 130/131/132	Wire guard thick layer passivated
90232 0012	WA 45 ALU	wall bracket 45°
90232 0013	WA 90 ALU	wall bracket 90°
90232 0004	DA	ceiling bracket

PRIMO XR Gas-tight LED-Tube Light Fitting Series 107...

Application:

Areas which are subject to harmful gas loads, which may damage the LEDs or even cause their total failure. E. g. ammonia and sulfur compounds in companies in the chemical industry, papermaking or tire production and storage etc.

Areas where the luminaires are exposed to jet and pressurised water, high humidity, moisture and dust, for infrequent or occasional operation (inspection lighting) and in the automotive industry.

For use in agriculture and animal husbandry with high ammonia concentration, see **version 107... XR LW**.

(For damp and cold ambient conditions with low duty cycles and in the case of

aggressive atmosphere, please contact us)

Design:

Tube: Acrylic glass (PMMA), modified for higher impact resistance, frosted for glare limitation, with welded end and connection caps.

Reflector: : Aluminum, with LED Module and ECG.

Connection: 3-pole (DIMD 5-pole) quick connector (FastConnect). End cap with integrated plug, socket included in scope of delivery.

Mounting: Variable mounting distance by means of stainless steel pipe clamps (included in scope of delivery). For direct ceiling and wall mounting.

Technical data Version 107... XR:

LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50.000h$ at 25°C ambient temperature, service life $L_{80} > 70.000h$ and $L_{70} > 100.000h$ at max. ambient temperature

ECG: 220-240V, 50/60Hz, overload and short-circuit protection

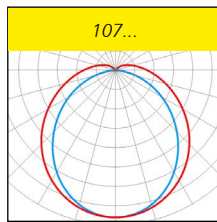
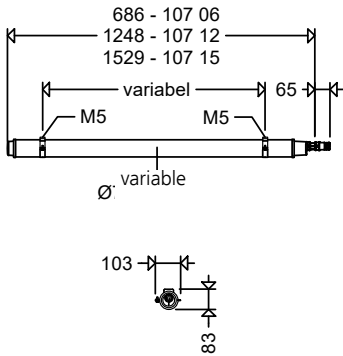
Ambient temperature: -20°C up to +40°C

Options:

- 2,200K, 2,700K, 3,000K, 5,000K, 6,500K especially at low temperatures (cold stores etc.)
- high colour rendering index $R_a > 90$
- signalization with **coloured LED**
- **amber-colored LEDs** (light colour 518) e. g. for insect-friendly lighting in outdoor areas etc.
- with green LED for lighting potato stores
- Corridor Mode (DIMC), frequent daily switching e.g. via motion detectors, especially at low temperatures (cold stores etc.)
- for low ambient temperatures
- for higher ambient temperatures up to +50°C
- for connection to central power supply unit (ZB) or emergency mains respectively
- with built-in through wiring DV 3x1,5mm² bzw. DIMD 5x1,5mm² (see Note)

Note:

The housing materials used for the PRIMO XR show good chemical resistance against a variety of chemicals. See also paragraph "Plastics in SCHUCH luminaires" in the "Technical supplement".

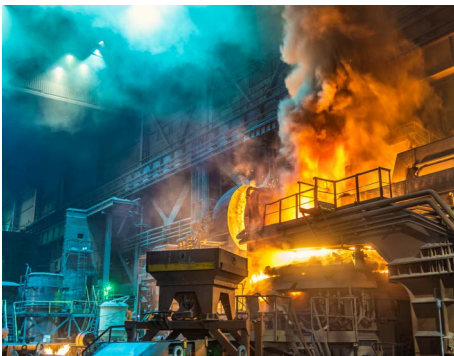


For vertical installation, please note:

Plug part must face downwards. Through wiring not possible. For Cable looping please use accessory 107 SVDA 3 or 107 SVDA-5 for DIMD.

Product highlights:

- extremely tight against harmful gases, hermetically sealed thanks to welding of pipe and end caps as well as a perfectly sealed quick connector. Safe protection of LED and ECG against damage and total failure due to exposure to gas
- dust- and pressure water tight, (IP68, 3m/ 30 min).
- IPX9K-tested (high pressure / steam jet cleaning)
- can also be used in unprotected outdoor areas
- suitable for rooms with increased fire risk
- impact-resistant PMMA tube with high mechanical strength
- homogeneous illumination by using a frosted tube, no particular light points visible, comfortable perception of light, brilliant glare limitation
- fast connection thanks to integrated FastConnect quick connector
- fast mounting with variable mounting distances by means of movable stainless steel pipe clamps



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Substitute for *	Weight [kg] without packing material
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107... XR (Xtreme Resistance)



10702 0001	107 06L12 XR	10	1.300	130	1 x 18W	1,3
10702 0002	107 06L20 XR	16	2.190	137	2 x 18W	1,3
10702 0003	107 12L22 XR	15	2.260	151	1 x 36W	2,2
10702 0004	107 15L34 XR	24	3.710	155	1 x 58W	2,6
10702 0005	107 12L42 XR	29	4.370	151	2 x 36W	2,2
10702 0006	107 15L60 XR	42	6.270	149	2 x 58W	2,6

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

DIMD versions are compatible with LIMAS Line light management system.

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Substitute for *	Weight [kg] without packing material
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107... XR DIMD (Xtreme Resistance)



10702 0021	107 06L12 XR DIMD	10	1.300	130	1 x 18W	1,3
10702 0022	107 06L20 XR DIMD	16	2.190	137	2 x 18W	1,3
10702 0023	107 12L22 XR DIMD	15	2.260	151	1 x 36W	2,2
10702 0024	107 15L34 XR DIMD	24	3.710	155	1 x 58W	2,6
10702 0025	107 12L42 XR DIMD	29	4.370	151	2 x 36W	2,2
10702 0026	107 15L60 XR DIMD	42	6.270	149	2 x 58W	2,6



107... XR LW



for use in stables contaminated with ammonia and in agricultural premises

Application:

Stables in agriculture, animal husbandry, fattening and rearing companies etc., rooms with high dust pollution and increased fire risk, e.g. barns, straw and feed stores

etc., areas where the light fittings are exposed to jet and pressurized water, e.g. cleaning with steam jets.

Technical data Version 107... XR LW:

LED: Linear modules 4,000K, CRI > 80, L₈₀ > 50,000h at max. ambient temperature
 ECG: 220-240V, 50/60Hz, overload and short-circuit protection
 Ambient temperature: -20°C up to +35°C

Additional advantages:

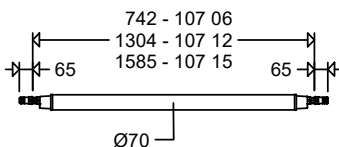
- permanently ammonia-resistant
- flicker-free light for stress avoidance and promotion of animal welfare
- low-glare light through satined tube
- DLG (German Agricultural Society) exam



10703 0014	107 15L34 XR LW	28	3.660	131	1 x 58W	2,6
10703 0015	107 12L42 XR LW	30	3.900	130	2 x 36W	2,2
10703 0016	107 15L60 XR LW	43	5.700	133	2 x 58W	2,6
10703 0024	107 15L34 XR LW DIMD	28	3.660	131	1 x 58W	2,6
10703 0025	107 12L42 XR LW DIMD	30	3.900	130	2 x 36W	2,2
10703 0026	107 15L60 XR LW DIMD	43	5.700	133	2 x 58W	2,6

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

DIMD versions are compatible with LIMAS Line light management system.



Through wiring

The light fittings (PRIMO XR and PRIMO LW) are available with through wiring installed at the factory only. The dimensions of the light fitting change due to the quick plug connection integrated into the connection cap on both sides (see dimension drawing). For the last luminaire in the light band, the socket part on the luminaire must be covered with a locking piece (see accessories / spare parts).

Accessories / Spare Parts

Article no.	Type	
Cable entries		
90278 9005	107 SVDA-3	plug-in connection double connection to looping in/out 3-pole grey
90278 9006	107 SVDA-5	plug-in connection double connection to looping in/out, 5-pole grey for DIM
Locking pieces for luminaires with through-wiring		
90278 9007	107 VS-3	3-pole locking piece grey
90278 9008	107 VS-5	5-pole locking piece grey
Accessories		
90272 9003	107 RO V4A P	stainless steel pipe clamp - 1.457 Mounting set (1 pair)

TUBEO Tubular LED Light Fitting Series 110...

Applications:

Public, commercial and industrial areas which are endangered by water jets, water spray, dusty atmospheres or high mechanical stress (vandalism). Car washes, inspections pits, docks, ships (For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Impact and shatter resistant clear PMMA tube, Ø 100mm.

Fastener: Tubular locking cap made of

stainless steel with foamed gasket, special element for compensation of length expansion.

Reflector: Sheet steel with electric components and frosted cover for glare limitation.

Connecting: 3-pole quick connect IP69K (FastConnect). Plug integrated and internally pre-wired, receptacle included for mains assembly.

Mounting: Supplied with 2 stainless steel pipe clamps.

Technical data:

LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50.000$ h at 25°C ambient temperature, service life $L_{80} > 70.000$ h and $L_{70} > 100.000$ h at max. ambient temperature

ECG: 220-240V, 50/60Hz, overload and short-circuit protection

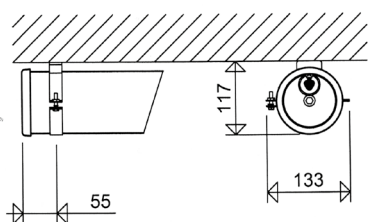
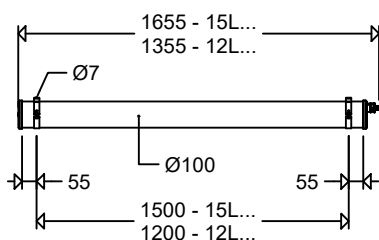
Ambient temperature: -25°C up to see article tables

Options:

- 2,200K, 2,700K, 3,000K, 5,000K, 6 500K
- high colour rendering index $R_a > 90$
- signalization with **coloured LED**
- **amber-colored LEDs** (light colour 518) e. g. for insect-friendly lighting in outdoor areas etc.
- PC-tube (4 x IK10/80 Joule) for food industry areas according to „International Featured Standard Food“ or vandalism-prone areas
- for low ambient temperatures
- increased protection against corrosive atmospheres or harmful gases, version **ER**
- optics with 60° angle (**TB**)
- for connection to group or central battery systems (**ZB**) or emergency mains respectively
- with through wiring up to 3 x 2,5 mm² or up to 5 x 2,5 mm² for DIMD types
- Light Management System **LIMAS** Line for controlling DIMD light fittings with DALI2 interface

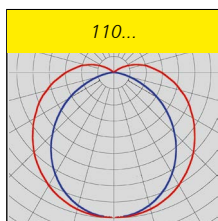
Note:

When installing in a saline atmosphere, please request the special version.



For vertical installation, please note:

Plug part must face downwards. Through wiring not possible. For Cable looping please use accessory 110 SVDA 3.



Product highlights:

- sturdy and extremely rugged tubular light fitting for application in rough environments
- dust- and pressure water tight (IP68, 3m/ 30 min)
- suitable for cleaning with high pressure cleaner (IPX9K)
- optional **high-impact resistant polycarbonate** tube 4 x IK10 (80 joule min.) for applications in the food industry, areas with a risk of vandalism etc.
- **highest efficiency** due to use of top-quality ECGs and LED modules
- **high colour reproduction** CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- **homogeneous illumination** by using **frosted covers**, no particular light points visible, comfortable perception of light, brilliant glare limitation
- with **Ψ-sign**, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- **FastConnect quick connector** - electrical connection without opening the fitting
- **flexible mounting** with pipe clamps
- **sustainable**, control gear and LED-module replaceable by qualified personnel on-site
- **future proof** by using standardized LED-modules (Zhaga)

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Amb. temp. max. [°C]	Substitute for ca. *	(without packing material)
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110...

110...		IP68	IPX9K	IK07	⊕	▽	⊗	⊕
11000 0003	110 12L22	15	2.390	159	45	1 x 36W	4,4	
11000 0004	110 15L34	21	3.440	164	45	1 x 58W	5,0	
11000 0005	110 12L42	27	4.240	157	35	2 x 36W	4,4	
11000 0006	110 15L60	39	6.160	158	35	2 x 58W	5,0	
11000 0007	110 15L100	67	10.360	155	35	3 x 58W	5,1	

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Amb. temp. max. [°C]	Substitute for ca. *	(without packing material)
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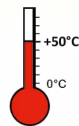
110... DIMD



11000 0013	110 12L22 DIMD	15	2.390	159	45	1 x 36W	4,4
11000 0014	110 15L34 DIMD	21	3.440	164	45	1 x 58W	5,0
11000 0015	110 12L42 DIMD	27	4.240	157	35	2 x 36W	4,4
11000 0016	110 15L60 DIMD	39	6.160	158	35	2 x 58W	5,0
11000 0017	110 15L100 DIMD	67	10.360	155	35	3 x 58W	5,1

DIMD versions are compatible with LIMAS Line light management system.

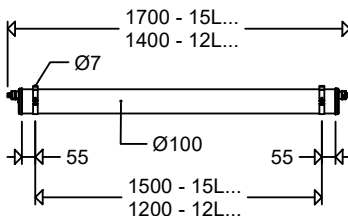
110... H50



for high ambient temperatures up to +50°C

11000 0055	110 12L42 H50	27	4.240	157	50	2 x 36W	4,4
11000 0056	110 15L60 H50	38	6.160	162	50	2 x 58W	5,1

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Through wiring

The light fittings are available with through wiring installed at the factory only. The dimensions of the light fitting change due to the quick plug connection integrated into the connection cap on both sides (see dimension drawing). For the last luminaire in the light band, the socket part on the luminaire must be covered with a locking piece (part of the delivery).

Accessories / Spare Parts

Article No.	Type	
90272 9001	110 RO V P	1 pair of pipe clamps, stainless steel
90273 9001	ABD 110 036	cover, tube PMMA clear, for 110 12 ...
90273 9002	ABD 110 058	cover, tube PMMA clear, for 110 15 ...
90273 9003	ABD 110 036 PC	cover, tube PC clear, for 110 12 ...
90273 9004	ABD 110 058 PC	cover, tube PC clear, for 110 15 ...
90049 0002	183 S	hook for chain suspension, stainless steel
90278 9001	110 SVDA-3	splitter connector for in-out wiring on one end
90278 9002	110 SVDA-5	splitter connector for in-out wiring on one end, 5-pole version for DIMD



LED-Sheet Steel Light Fitting Series 190...

Applications:

Industrial, craftsmen and commercial facilities with extreme conditions, aggressive environments (e.g. oil, grease) or high mechanical exposure, paint shops and spray booths (non-hazardous areas). (For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Sheet steel, light grey, powder coated (RAL 7035).

Safety glass: Frameless, clear, internal hinges, tiltable.

Reflector: Aluminium painted, with LED-modules, glare limitation modules

and all electrical components screwed to the glass.

Central locking: Internal, to be opened from outside with 5mm allen key, inner hinges on the opposite side.

Terminal: 5-pole terminal, clamping range 2.5 mm² max.

Cable entries: 3 x M20 or 3 x M25 (2 cable gland and 2 blanking plugs), looping the cable at one side possible.

Mounting:

2 fixing holes Ø 9mm,

Sealing and pressure disks included.

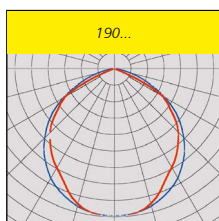
Use mounting screws Ø 6mm.

Note:

This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention bassins or water treatment plants.

Note:

In case of permanently humid atmosphere please ask for stainless steel housings.



Technical data:

LED: Linear modules 4,000K, CRI > 80, service life L₉₀ > 50.000h at 25°C ambient temperature, service life L₈₀ > 70.000h and L₇₀ > 100.000h at max. ambient temperature

ECG: 220-240V, 50/60Hz, overload and short-circuit protection

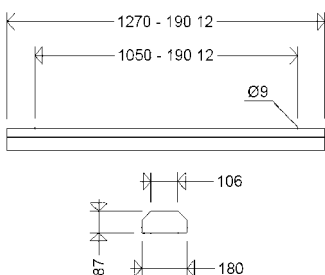
Ambient temperature: -20°C up to see article tables

Options:

- with dimming function via DALI2 interface, compatible with LIMAS Line (DIMD) Light Management System
- in stainless steel, powder coated
- for connection to group or central battery systems (ZB) or emergency mains respectively

Product highlights:

- extremely flat and robust design
- smooth sheet steel housing without contamination-prone external locking parts
- comfortable central locking system with internal hinges
- reflector and cover in sandwich design to protect the LED-Modules from mechanical or electrostatic damages due to accidental contact
- homogeneous illumination by using glare limitation modules, no particular light points visible, comfortable perception of light, brilliant glare limitation
- high colour rendering CRI > 80, according to the work place guidelines suitable for nearly all branches
- with ∇ -sign, therefore suitable for application in rooms/locations with increased fire risk due to flammable dusts and fibers.
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future-proof due to use of standardized LED-modules (Zhaga)



Dustproof/Waterproof Light Fittings

Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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190...



19002 0014	190 12L40	1	32	4.330	135	60	1 x 36 / 1 x 58	8,5
19002 0015	190 12L60	1	46	6.200	135	55	2 x 36 / 2 x 58	8,7

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

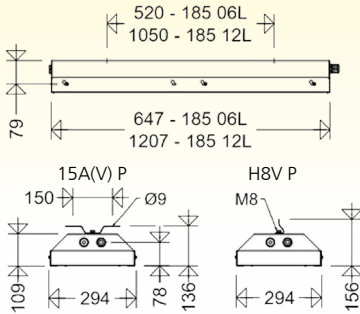
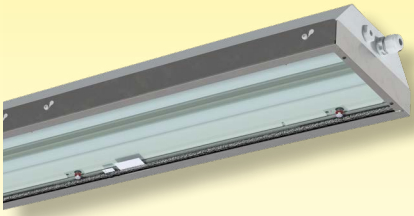
Accessories / Spare Parts

Article No.	Type	
Spare glass clear		
19001 9002	ABD 190 12	cover, spare glass clear, for 190 12
Cable entries		
25610 9000	2561	plastic cable gland M20 x 1,5
25730 9000	2573	threaded blanking plug M20x1,5
Mounting accessories		
26000 0004	W 26 P	1 pair wall angle brackets
26000 0002	W 26/30 P	1 pair wall angle brackets 30°
26000 0003	W 26/45 P	1 pair wall angle brackets 45°
90000 0002	15A P	1 pair ceiling brackets, galvanized steel
90032 0002	15AV P	1 pair ceiling brackets, stainless steel

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.



Article no.	Type	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Ambient temperature max. [°C]	Substitute for ca. *	Weight [kg] without packing material
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185... SSK



for blasting rooms and cabins

Applications:

Rooms and cabins where blasting material (sand, glass beads, etc.) is used.

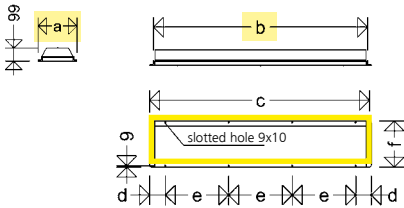
Design:

As standard version 185..., but: protruding, easily replaceable polycarbonate cover in stainless steel frame to protect the safety glass from damage by blasting material. The replacement interval may differ depending on the blasting material used.

18501 0041	185 06L30 SSK	1	22	3.100	141	55	1 x 58W	9,3
18501 0042	185 06L45 SSK	1	32	4.660	146	55	2 x 36W	9,3
18501 0043	185 06L60 SSK	1	43	6.190	144	45	2 x 58W	9,3
18501 0011	185 12L60 SSK	1	43	6.190	144	55	2 x 58W	16,2
18501 0012	185 12L90 SSK	2	64	9.310	145	55	3 x 58W	16,7
18501 0013	185 12L120 SSK	2	86	12.270	143	45	4 x 58W	16,7

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Installation dimensions



Type	a	b	c	d	e	f
EB 82. 06L	302	660	710	55	300	348
EB 82. 12L	302	1224	1270	125	340	348

Frame for Recessed Installation

retrofit possible!

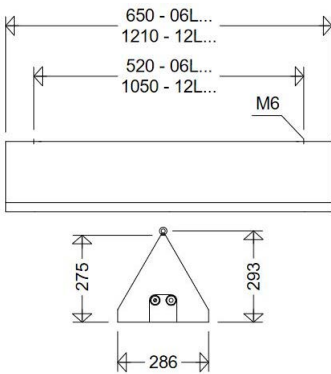
Light fittings of series 185... can be equipped with a frame even at a later stage.

Mounting by means of M5 bolts to the long sides of the housing (see drawing).

Article No.	Type	
18091 0020	EB 82. 06L	frame for narrow housing for 185 06L
18091 0021	EB 82. 12L	frame for narrow housing for 185 12L

Attention: When planning the opening for recess installation please allow additional clearance for the cable glands.

Attention: When installing in insulated ceiling and wall cut-outs, the maximum ambient temperature (Tmax) of the luminaire is reduced by 5 ° C!



Mounting with RS 6

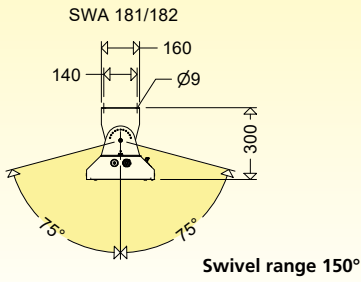
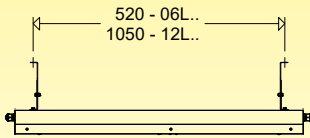
Dust protection cover

retrofit possible!

Light fittings of series 185... series can be equipped (also retrofitted) with a dust protective cover to prevent dust deposits on the light fitting.

It is fastened to the long sides of the light fitting housing with M5 screws. M6 eyebolts (RS 6 P) are supplied for chain suspension.

Article No.	Type	
18093 0001	SSH 185 06	dust protection cover for 185 06L
18093 0002	SSH 185 12	dust protection cover for 185 12L



Swivel Arm Mounting System

retrofit possible!

Light fittings of series 185.. can be equipped with a swivel arm mounting system at any time.

The swivel arms are fixed to the suspen-

sion points at the upper side of the housing. Swivel range: $\pm 75^\circ$ (see dimensions in diagram).

Article No.	Type	
18092 0001	SWA 181/182	for all lamp lengths, consisting of 2 swivel brackets and screws M8



Mounting material

Suspension brackets H8V P



Ceiling brackets 15A P



Wall/ceiling angles WD 45 P



Note:

When using the carrier rail TRS 2000 the mounting accessories for TRS 2000 EX should be used (see section „Ex-light fittings“).

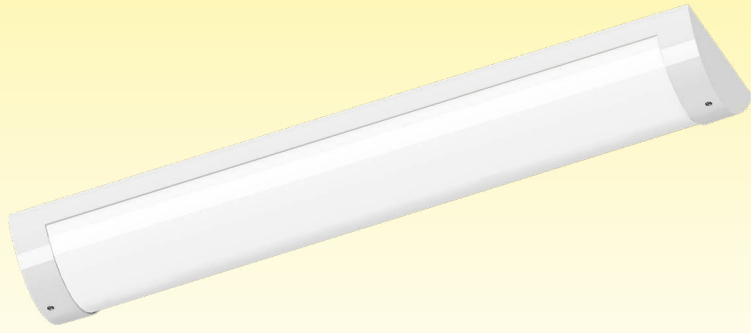
Accessories / Spare Parts

Article No.	Type	
Spare glasses		
82101 9001	ABD 821 06	cover, spare glass clear, for 185 06 ..., e821, nD822...
82101 9002	ABD 821 12	cover, spare glass clear, for 185 12 ..., e821, nD822...
18090 9027	ABD 185 06 PC SSK	cover, glass PC clear SSK, EPMD without longitudinal fixing rail, for 185 06 ... SSK
18090 9025	ABD 185 12 PC SSK	cover, glass PC clear SSK, EPMD without longitudinal fixing rail, for 185 12 ... SSK
Cable entries/cable glands		
25600 9000	2560	plastic cable gland M25 x 1,5
25720 9000	2572	threaded blanking plug M25 x 1,5
Mounting material		
90019 0002	RS 6 P	2 eyebolts M6, galvanized steel
90001 0002	H8V P	2 suspension eyes, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
26000 0005	WD 45 P	2 wall/ceiling angle 45°, steel
26000 0006	WD 45 VP	2 wall/ceiling angle 45°, stainless steel (blasted)

SEGURO

Vandal Proof LED Light Fitting

Series 142...



Applications:

Subways, railway stations, underground stations, car parks, lavatories, schools, sport stadiums, stairways, bus-stops, prisons etc.

(For damp and cold ambient conditions with low duty cycles and in the case of aggressive atmosphere, please contact us)

Design:

Housing: Flat, sturdy aluminium profile, powder-coated, RAL 9016 (traffic white). Concealed cable tray and mounting holes on the back, all-round silicone gasket.

Cover: Frosted polycarbonate, with die-cast aluminium end caps, concealed screw fixing, detachable and removable.

Reflector: Aluminium, white painted, with Zhaga-compliant LED modules.

Fasteners: With stainless steel safety screws M6 (TORX Tx30 with pin) counter-sunk in the end caps, the cover and end caps are screwed to the housing.

Electrical connection: 3-pole connection terminal; max. 2.5mm².

Cable entries: 2 x Ø 20mm with sealing plugs, concealed in the end cap on the face side, for in-out and continuous row wiring.

Mounting system: 4 holes Ø 8mm, concealed. Please use screws Ø 6mm for mounting.

Technical data:

LED: Linear modules 4,000K, CRI > 80, service life L₉₀ > 50.000h at 25°C ambient temperature, service life L₈₀ > 70.000h and L₇₀ > 100.000h at max. ambient temperature

ECG: 220-240V, 50/60Hz, overload and short-circuit protection

Ambient temperature: -20°C bis +40°C

Options:

- 2,200K, 2,700K, 3,000K, 5,000K, 6,500K
- signalization with **coloured LED**
- for higher ambient temperatures
- special paint finish in any RAL colours
- protection class II (SKII)
- asymmetrical light distribution
- for connection to group or central battery systems (ZB) or emergency mains respectively
- with dimming function via DALI2 interface, compatible with LIMAS Line BASIC/PRO (DIMD) Light Management System
- through wiring up to 7x2.5 mm
- cable looping at 1 small side (RR)

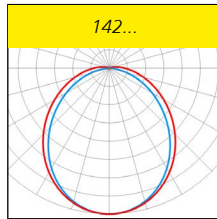
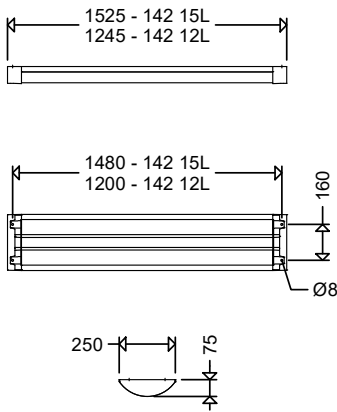
Product highlights:

- extremely flat and sturdy design
- highly efficient with high luminous efficacy and low power consumption
- polycarbonate diffuser of high-impact resistant, IK value acc. to EN 50102 > 2 x IK10 (≈ 40 joule min.)
- homogeneous illumination by using frosted covers, no particular light points visible, comfortable perception of light, brilliant glare limitation
- safe function of the LED even in case of impacts or vibrations
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard



Note:

For applications in seaside areas we do recommend enclosures in special design with KTL coating.



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Substitute for *	Weight [kg] without packing material
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142 ...

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Substitute for *	Weight [kg] without packing material
14200 0003	142 12L22	17	2.550	150	1 x 36W	7,7
14200 0004	142 12L42	29	4.120	142	2 x 36W	7,7
14200 0007	142 12L60	39	5.490	140	2 x 58W	7,7
14200 0005	142 15L34	24	3.560	148	1 x 58W	9,4
14200 0006	142 15L60	42	6.050	144	2 x 58W	9,4

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Accessories / Spare Parts

Article No.	Type	Description
14211 9000	EK 142	End cap, powder-coated aluminium RAL 9016
14211 9002	ABD 142 12	cover, frosted PC diffuser, for 142 12 ...
14211 9003	ABD 142 15	cover, frosted PC diffuser, for 142 15 ...
90063 9000	2511	blanking plug M20

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.



Aluminium Carrier Rails for Continuous Row Installation

Series TRS 2000... and AL...

Application:

For rows of light fittings suspended from the ceiling, allowing an easy installation and assembly.

Design:

Aluminium profiled carrier rails (AL/TRS 2000)

Lengths: 2, 3 or 5 m. Additional covering strip (TRS A) for series TRS.

Mounting accessories:

For each length of a light fitting only one suspension point is required.

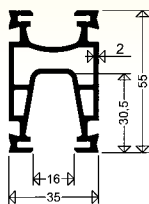
Connection brackets (TRS V) - to be ordered separately - allow joining the individual rails up to any length wanted.

The carrier rails can either be mounted

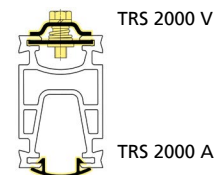
directly to the ceiling by means of the ceiling brackets (183 A / TRS D) or they can be

suspended from the ceiling by means of the hook (183 H / TRS S) in combination with the chain (KP 40) (max. distance of mounting rail elements 2.5m). Perlon pendulums are not suitable for this purpose.

2 or 3 devices (183 L / TRS L) serve for mounting a light fitting to the rail. The suspension devices 183 A / TRS D and 183 H / TRS S as well as the devices 183 L / TRS L are movable in the longitudinal direction of the rails.



TRS 2000 H



TRS 2000 V



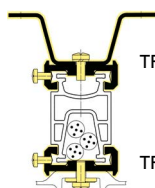
TRS 2000 A

TRS 2000 A

TRS 2000 A



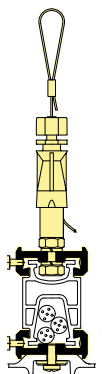
TRS 2000 S



TRS 2000 D

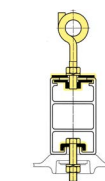
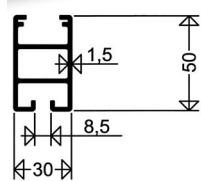
TRS 2000 L

TRS 2000 L

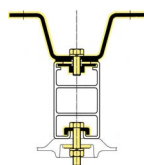


TRS 2000 FF

TRS 2000 L



183 H



183 A

183 L

183 L

TRS 2000...

aluminium carrier rails

Product highlights:

- universal quick-action mounting system for explosion- and weather-proof light fittings.
- easy to install. (Fasten the suspension devices to the light fitting, push the light fitting with its suspension devices into the carrier rail profile - ready.)
- high carrying force thanks to a new profile structure
- possibility to insert the mains cable into the cable channel
- cover strips to protect against dirt deposit.

Article no.	Type	Product	Weight ca. [kg]
90260 0001	TRS 2000 2M	Alu-rail 2 m long	3,03
90260 0002	TRS 2000 3M	Alu-rail 3 m long	4,55
90260 0003	TRS 2000 5M	Alu-rail 5 m long	7,58
90265 0005	TRS 2000 A 1M	covering strip, 1 m long	0,04
90265 0006	TRS 2000 A 2M	covering strip, 2 m long	0,07

Mounting Devices

Article no.	Type	Product
90265 0004	TRS 2000 V	stainless steel device (profile) for rail connection
90265 0002	TRS 2000 D	stainless steel ceiling bracket
90022 0001	KP 40	chain 1 m long with 2 eyelets for fastening and length compensation
90265 0001	TRS 2000 S	stainless steel swing hook for chain
90265 0003	TRS 2000 L	luminaire suspension device
90265 0010	TRS 2000 H	stainless steel luminaire mounting, for later installation
90265 0011	TRS 2000 FF	FastFix quick assembly system, steel, galvanised, with 2m steel cable, rope length infinitely variable

Please note: For mounting the sheet steel light fittings (such as series 185...) please use the mounting accessories of the ex-proof light fittings.

AL...

aluminium carrier rails

Article no.	Type	Product	Weight ca. [kg]
90005 0001	AL 2M	Alu-rail 2 m long	1,6
90005 0002	AL 3M	Alu-rail 3 m long	2,4

Mounting Devices

Article no.	Type	Product
90265 0004	TRS 2000 V	stainless steel device for rail connection
90185 0001	183 A	stainless steel ceiling bracket for ceiling mounting of the carrier rail
90022 0001	KP 40	chain 1 m long with 2 eyelets for fastening and length compensation
90049 0001	183 H	stainless steel hook for chain pendulum
90050 0001	183 L	stainless steel luminaire mounting system complete

Sheet steel Carrier Rails for Continuous Row Installation Series TRS 1000

Application:

For rows of polyester dust-/waterproof light fittings suspended from the ceiling, allowing an easy installation an assembly.

Design:

Profile carrier rails made from sheet steel, galvanized and painted in white on the outside

Lengths:

3065mm (TRS 1000/2) and

4595mm (TRS 1000/3)

Additional covering strip (TRS 1000 A)

1538mm

Mounting accessories:

Connection brackets (TRS 1000 V) – to be ordered separately – allows joining the

individual rails up to any length required.

The carrier rails can either be mounted directly to the ceiling by means of the ceiling hanger (TRS 1000 S) or they can be suspended from the ceiling with chain suspension (KP 40), (max. distance of mounting rail elements 2m). 2 or 3 devices (TRS 1000 L) serve for mounting a light fitting to the rail. The carrier rail can be covered with a covering strip (TRS 1000 A) and they can also be closed at the ends with caps (TRS 1000 E).

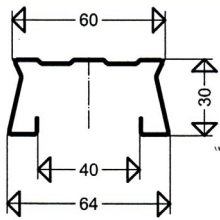
TRS 1000...

Sheet steel carrier rail systems

Article no.	Type	Product
90261 0001	TRS 1000 /2	sheet steel carrier rail 3,065mm long
90261 0002	TRS 1000 /3	sheet steel carrier rail 4,595mm long

Mounting equipment

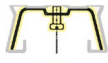
Article no.	Type	Product
90264 0001	TRS 1000 V	rail connector
90264 0002	TRS 1000 S	rail suspension device for direct mounting or chain pendant suspension
90022 0001	KP 40	chain 1m long with 2 eyelets for length compensation
90264 0008	TRS 1000 L P	luminaire mounting device (1 pair)
90264 0004	TRS 1000 A	covering strip for the rail 1,538mm
90264 0007	TRS 1000 E P	end cap for the rail (1 pair)



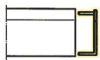
TRS 1000 S



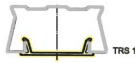
TRS 1000 L



TRS 1000 V



TRS 1000 E



TRS 1000 A

Note:

Most of our light fittings have got two entries at one end of the housing for looping the mains cable. **Thus, the classical through-wiring system is no longer required in many cases.**

The maximum allowed ambient temperature will be reduced by up to 5°C if Through-Wiring operating current exceeds 8A (5x1,5mm²) respectively 10A (5x2,5mm²).

Through-Wiring Systems

One fixed multipole terminal at each end of the housing.
Heat-resistant PVC or silicone cables fixed to the housing with clips.

Through-wiring systems:

1,5mm² up to 10A max.
2,5mm² up to max. 16A max.

In case of loads >8A the maximum permissible ambient temperature is reduced by 5°C.
Light fittings with electronic ballasts do have a high inrush current, hence the maximum permissible number of waterproof LED light fittings with through-wiring system per circuit breaker must be observed.
(see <http://www.schuch.de/en/service/photometric-files>)

For light fittings in continuous row installation we do recommend factory-fitted through-wiring systems.

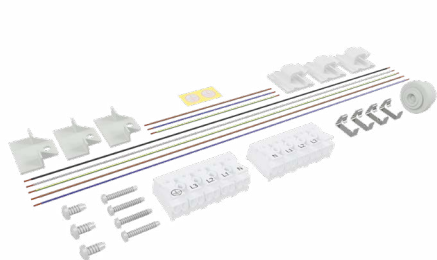
Through-Wiring Systems Installed in the SCHUCH Factory

If through-wiring systems are wanted, we supply our dustproof/waterproof light fittings with **standard through-wiring systems: 5x1,5mm² PVC.**

Other conductor cross-sections and numbers of cores as well as through-wiring made of silicone are available on request.

For retrofitting our retrofit kits must be used.

Through-wiring systems for subsequent installation:



Article no.	Type	Product
Universal retrofit kits, suitable for 161PX...		
11831 0046	DV/NS P 5x1,5 161PX	5x1,5mm ² PVC, 105°C
11831 0047	DV/NS P 5x2,5 161PX	5x2,5mm ² PVC, 105°C
Universal retrofit kits, suitable for 161/162/163/164...		
11831 0013	DV/NS P 5x1,5	5x1,5mm ² PVC, 105°C
11831 0022	DV/NS P 5x2,5	5x2,5mm ² PVC, 105°C
11831 0014	DV/NS S 5x1,5	5x1,5mm ² Silicone, 150°C
11831 0024	DV/NS S 5x2,5	5x2,5mm ² Silicone, 150°C
Universal retrofit kits, suitable for 144...		
11831 0030	DV/NS P 5x2,5 144.	5x2,5mm ² PVC, 105°C
11831 0031	DV/NS S 5x2,5 144.	5x2,5mm ² Silicone, 150°C
Universal retrofit kits, suitable for 167... G2 LUXANO		
11831 0040	DV/NS P 3x1,5 167.G2	3x1,5mm ² PVC, 105°C
11831 0041	DV/NS P 3x2,5 167.G2	3x2,5mm ² PVC, 105°C
11831 0042	DV/NS P 5x1,5 167.G2	5x1,5mm ² PVC, 105°C
11831 0043	DV/NS P 5x2,5 167.G2	5x2,5mm ² PVC, 105°C
Retrofit kits for simplified through-wiring by customer with NYM cable up to 2,5mm², can be used for 167... G2 LUXANO		
11831 0044	DV/NS NYM3 167.G2	up to 3x2,5mm ²
11831 0045	DV/NS NYM5 167.G2	up to 5x2,5mm ²



High Bay Fittings

Perfect solutions for various requirements

The company has produced light fittings for applications in workshops, industrial, processing and storage areas even in the beginning of its history. When high-pressure lamps appeared, this product line had become one of the main segments in the whole range. As in other manufacturing areas, SCHUCH design engineers covered more and more application fields with severe operating conditions. As a result, along with standard series, many new special versions have been developed over the time. Such special versions have turned into industry solutions due to which SCHUCH is known far beyond Germany by today.

Even in the most severe conditions, such as chlorine electrolysis plants, galvanizing plants or compost systems, SCHUCH light fittings demonstrate reliable operation and withstand the most aggressive environments.

New industrial LED light fittings feature, in particular, excellent temperature control, which is the basic condition of a long service life and one of the most important quality factors for a LED light fitting.

STANDARD OR CUSTOMIZED SOLUTIONS? SCHUCH OFFERS BOTH.

1926

Workplace lights, ceiling and pendant lights up to 1,000 W as well as deep, semi-deep and diagonal spotlights up to 2,000 W for illuminating workshops are part of the product range early in the company's history.

1949

Production of the first industrial reflector-light fitting for mercury vapor lamps.

1975

Production of the first industrial high bay light fitting made of fiberglass-reinforced polyester for application in very aggressive environment, such as in galvanizing plants, compost systems, steeping plants, etc.

1998

Application of inductive lamp systems with a minimum service life of 60,000 hours. This allowed using high bay light fittings in electrical high-current and strong-magnetic-field applications, such as chlorine electrolysis plants.

2001

Introduction of the first high bay light fitting having a specific triangular shape, which is designed for dust-loaded and polluted environments with a high ambient temperature and high fire hazard.

2003

The range of high bay light fittings has been extended significantly by adding special versions for food industry, blast rooms, applications with high ambient temperatures up to +90°C and many others.



High Bay Fittings

Product	Series	Page
Lightmanagement		
LIMAS Air		128
smart radio-based lighting control of DALI light fittings		
LIMAS Line BASIC/PRO		129
smart wired lighting control of DALI light fittings		
with 2 point mounting		
DUEVO MID	3301/3302...	130-133
• for food industry areas	... IFS	132
• for cattle and horse stables	... ER	132
• for pig stalls	... LW	132
• variable setting of luminous fluxes	3301/02... VARIO	134-135
• for use in galvanising plants	3302... V	136
DUEVO XL MID	3305...	137-138
• for food industry areas	... IFS	138
with 1 point mounting		
TRIANO <i>disc</i>	3410/3420/3430...	139-141
• smart lighting control for high-bay	LIMAS Air	140
TRIANO G2	3401/3402... G2	142-144
• smart lighting control for high-bay	LIMAS Air	143
TRIANO L	3403...	145-147
• smart lighting control for high-bay	LIMAS Air	147
TRIANO XL	3405...	148-149
• smart lighting control for high-bay	LIMAS Air	149
Floodlights		
for sand/glass blasting areas and cabins		150-151
FOCO L	7700... SSK	150
FOCO XL	7800... SSK	151

LED TECHNOLOGY

2008

LED reflector light fittings are the first LED high bay light fittings in the product program.

2013

SCHUCH introduces the DUEVO. The first exclusively for LED applications developed LED High bay light fitting with 2 point mounting.

2015

TRIANO Series for 1-point suspension mounting has been added to the range of high bay LED light fittings.

2017/2019

The range is continuously expanded. TRIANO L and XL and DUEVO XL for halls with large mounting heights follow.

2019/20

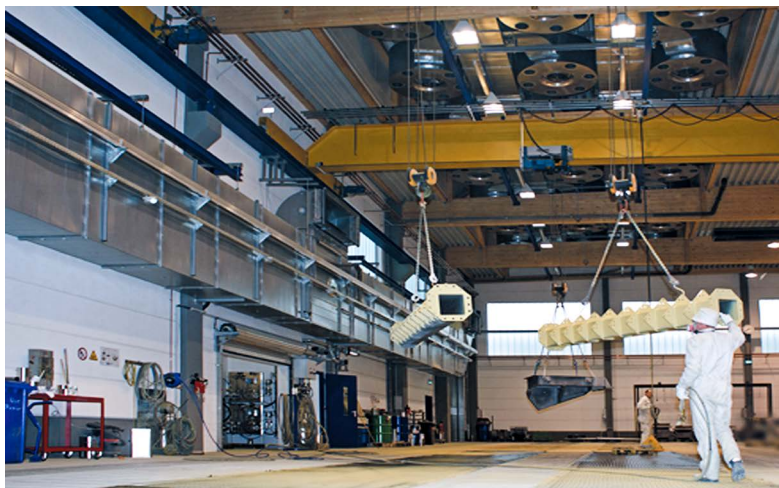
SCHUH intensely investigates the influence of harmful gases on LED lights. The RESISTANT luminaire range develops from this.

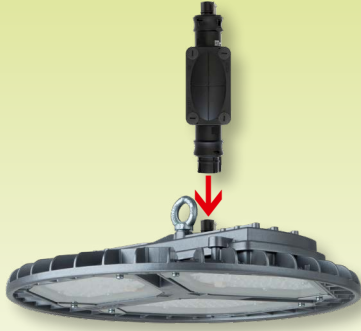
2020/2021

Introduction of the new TRIANO *disc* high-bays.

2022/2023

With the LIMAS Air and LIMAS Line light management systems, all SCHUCH high-bay light fittings become smart in no time at all. Extremely simple, fast, tool-free and without additional installation effort.





LIMAS Air - smart radio-based lighting control of DALI light fittings

Whether replacing an existing system or installing a new one, with the LIMAS Air lighting management system you can now make your lighting system smart in no time at all and bring it to a new level. Extremely simple, fast and without additional installation effort.

With the LIMAS Air radio module, which is connected to the luminaire via FastConnect quick plug-in connection, every DIMD high bay luminaire from SCHUCH becomes a smart luminaire. Commissioning is also child's play and extremely convenient with the free smartphone app. Based on CASAMBI® radio technology, you control your lighting system with low Connected load and a long range, whereby the participants are connected and communicate with each other via a self-organised mesh network. Up to 250 luminaires in a system can be controlled and regulated by sensors specially developed for the industry. From simple switching and dimming to complex lighting scenes, everything can be implemented in the simplest way.



Product highlights:

- can be used with all SCHUCH high-bay luminaire series
- simple installation without tools and without additional installation effort (**FastConnect plug-in system**)
- convenient configuration and control via Bluetooth using free smartphone app (Android and iOS) and wall push-button
- up to 250 luminaires can be controlled in one system
- significant reduction of operating costs and CO₂ reduction
- maximum failure safety thanks to autarkic, self-healing mesh network. If one luminaire fails, the other luminaires automatically reconnect via the mesh network
- Radio module can be replaced without tools thanks to FastConnect plug connection
- Version with cable for flexible positioning of the radio module in case of space problems
- extensive portfolio of sensors and actuators
- no gateway and no internet connection required

LIMAS Air FM



LIMAS Air FM MK



Radio module

Type	Article No.	
LIMAS Air FM	90547 9001	CASAMBI® radio module with FastConnect quick-connector for controlling DIMD luminaires
LIMAS Air FM MK	90547 9002	CASAMBI® radio module with FastConnect quick-connector and 1m cable

LIMAS Air BM/DS IR LPH max. 14m



LIMAS Air BM/DS IR LPH max. 2,2m



LIMAS Air TAST INTER UP max. 4 KONT



LIMAS Air DALI PS/C



LIMAS Air TAST UP max. 4 KONT



RFL LIMAS Air HUB TRI



System components

Type	Art.-No.	
LIMAS Air BM/DS IR LPH max. 14m	90547 9005	Motion and light sensor for a mounting height of max. 14m and a detection area of up to 28m diameter.
LIMAS Air BM/DS IR LPH max. 12m	90547 9006	Motion and light sensor for a mounting height of max. 12m and a detection area of max. 3m x 15m.
LIMAS Air BM/DS IR LPH max. 20m	90547 9007	Motion and light sensor for a mounting height of max. 20m and a detection area of max. 5m diameter.
LIMAS Air BM/DS IR LPH max. 2,2m	90547 9008	Motion and light sensor for a mounting height of max. 2.2m and a detection area of max. 5m diameter.
LIMAS Air TAST INTER UP max. 4 KONT	90547 9009	Push-button interface for connecting up to 4 analogue push-button contacts. Intended for mounting in a flush-mounted box.
LIMAS Air DALI PS/C	90547 9010	Radio module with DALI power supply and broadcast control of up to 60 ECGs (total current 120mA). Power supply 230V.
LIMAS Air TAST UP max. 4 KONT	90547 9011	Battery-free 4-fold „EnOcean“ wireless pushbutton. When the button is pressed, energy is generated to supply the button electronics.
RFL LIMAS Air HUB TRI	90546 9013	Light management controller (2.4 GHz mesh network) with radio antenna and RFL base.



LIMAS Line BASIC/PRO - smart wired lighting control of DALI light fittings

With the LIMAS Line light management system, every DIMD light fitting from SCHUCH becomes a smart light fitting and brings you major economic and ecological benefits.

LIMAS Line is available in 2 versions:

LIMAS Line BASIC enables fully automated, dynamic light in conjunction with the corresponding sensors. Configuration is carried out using a smart end device (Android or iOS) via Bluetooth. This only requires a free app with which the room to be illuminated can be recreated and equipped and configured with luminaires, sensors and push-buttons.

LIMAS Line PRO offers extended options and additional functions. In addition to DIMD luminaires, all self-contained luminaires (MA-Z) in the SCHUCH portfolio can also be controlled and monitored. Configuration and control are carried out via PC without additional software - a browser is sufficient. The connection between the PC and LIMAS Line PRO can be realised either via an existing network or by establishing a peer-to-peer connection. An Internet connection is not required. For further details and properties, see the chapter on lighting management systems.

Control components

LIMAS Line BASIC SCS



LIMAS Line PRO SCE



Type	Art.-No.	
LIMAS Line BASIC SCS	90545 0005	DALI2 controller for controlling up to 64 devices.
LIMAS Line PRO SCE	90545 0031	DALI2 controller for controlling up to 192 devices. Monitoring of single battery emergency lights possible.

System components

LIMAS Line IC



LIMAS Line DALI PS 240mA



LIMAS Line BM/DS PIR 4,0-14,0m R STE



LIMAS Line BM/DS HF 2,0-4,0m R STE



LIMAS Line MK4x10A



Type	Art.-No.	
LIMAS Line IC	90545 0015	DALI-2 input controller with 4 independent inputs for connection of floating contacts/buttons.
LIMAS Line DALI PS 240mA	90545 0016	DALI bus power supply with max. 240mA.
LIMAS Line BM/DS PIR 2,5-2,8m R STE	90545 0035	Infrared DALI2 motion detector including light sensor for mounting heights of 2.5-4m.
LIMAS Line BM/DS PIR 4,0-14,0m R STE	90545 0036	Infrared DALI2 motion detector including light sensor for heights up to 14m.
LIMAS Line BM/DS PIR 4,0-16,0m Q STE	90545 0037	Infrared DALI2 motion detector with light sensor for mounting heights up to 16m.
LIMAS Line BM/DS PIR 1,8-2,5m RH STE	90545 0038	Infrared DALI2 motion detector with light sensor for vertical wall mounting for height up to 2.5m.
LIMAS Line BM/DS PIR 2,5-5,0m Q STE	90545 0039	Infrared DALI2 motion detector with light sensor. For a mounting height of up to 5m and a maximum detection area of 6m x 23m.
LIMAS Line BM/DS HF 2,0-4,0m R STE	90545 0040	HF DALI2 motion detector with light sensor for a mounting height of up to 4.8m and a maximum diameter of the detection area of 8m.
LIMAS Line MK4x10A	90545 0041	Four potential-free relays, switchable with DALI. Suitable for signaling test and system states of single battery emergency lights.



DUEVO MID LED High Bay Fitting Series 3301/3302...

Applications:

Production areas and warehouses, cool storage facilities, walkways in shelve areas, driveways etc.

Design:

Two versions are available: 1 (3301...) or 2 (3302...) LED-segments.

Housing: Die-cast aluminum, DB 702 (mica-iron paint, grey). **LED-segment(s)** with LED modules, optics behind tempered safety glass (IK10). **ECG segment** with integrated electronic control gear, prewired on terminals.

Light distribution: Without optics wide beam, with optics wide (B), narrow-wide (TB) or narrow beam (T), respectively oval optics (TO) for illumination of aisles in rack areas.

Entries: 1 gland and 1 blind plug M25 x 1,5.

Mounting: 4 eyelets M6 included in delivery.

Technical Data:

LED module: 4,000K, CRI > 80, service life $L_{80} > 100,000h$ at 25°C ambient temperature, service life $L_{70} > 100,000h$ at max. ambient temperature, Zhaga compliant

ECG: 220-240V, 50/60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): via 230V control input. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimming levels possible.

Digital dimming with DALI interface (DIMD) compatible with LIMAS Line and LIMAS Air Light Management System in combination with a FastConnect quick connector.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -20°C up to +50°C / +60°C

Options:

- 5,000K, light colour 850

- PMMA cover frosted (C) for glare limitation

- for low ambient temperatures down to -40°C (T40)

- for high ambient temperatures up to +80°C (H80)

- increased (ER) or high (HR) protection against corrosive atmospheres or harmful gases

- wireless Light Management System LIMAS Air

- with green LED for lighting potato stores

- Version with additional threaded holes:

• for swivel arm brackets (swivel range 0° - 45°)

• ball sports proof version with special ceiling fixings for sport halls

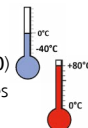
- for connection to group or central battery systems (ZB) or emergency mains respectively

- additional overvoltage protection (OP)

- cable looping (RR)

- various additional cable entries on ceiling and front side

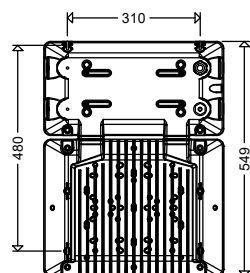
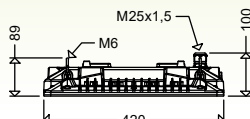
- FastConnect for electrical connection without accessing the internal terminal block



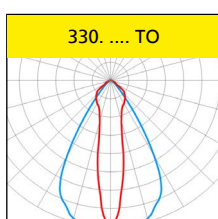
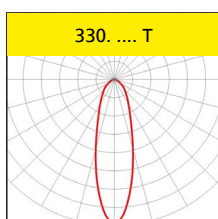
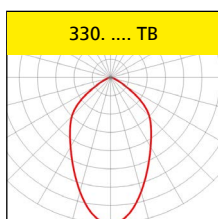
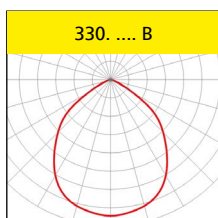
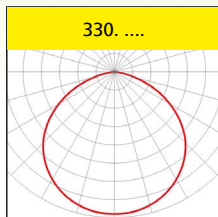
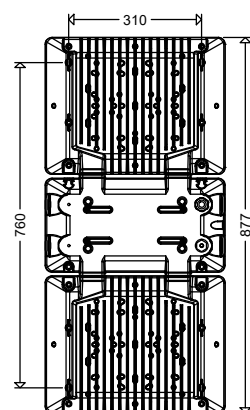
Product highlights:

- high system service life of up to 100,000h at maximum ambient temperature
- optimized thermal management due to direct mounting of the LED modules to the housing and separate housings for ECG- and LED-modules, huge heat sink with excellent heat dissipation
- high quality ECG with overload and short circuit protection
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping. No dark zones if any single LED would fail. The uniformity of the illumination is kept.
- colour rendering index CRI > 80
- variable electrical installation methods due to max. 8 cable entries (see options)
- ∇-symbol, suitable for rooms with increased fire risk
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

3301...



3302...



Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Weight [kg] (without packing material)	Connected load [W]	Luminous flux [lm]	Light output [lm/W]	Substitute for *
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3301...



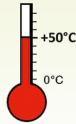
... for ambient temperatures up to +50°C

1 LED segment

33010 0001	3301 L210		•			8,9
33010 0002	3301 L210B		•			9,2
33010 0013	3301 L210TB			•		9,2
33010 0003	3301 L210T				•	9,2
33010 0014	3301 L210TO				•	9,2
33010 0200	3301 L210 DIMD	•	•			8,9
33010 0201	3301 L210B DIMD	•	•			9,2
33010 0212	3301 L210TB DIMD	•		•		9,2
33010 0202	3301 L210T DIMD	•			•	9,2
33010 0213	3301 L210TO DIMD	•			•	9,2

135	20.200	150	HIE 400
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3301...



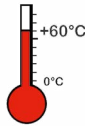
... for ambient temperatures up to +60°C

33010 0004	3301 L110 H60		•			8,9
33010 0006	3301 L110B H60		•			9,2
33010 0015	3301 L110TB H60			•		9,2
33010 0008	3301 L110T H60				•	9,2
33010 0203	3301 L110 DIMD H60	•	•			8,9
33010 0205	3301 L110B DIMD H60	•	•			9,2
33010 0214	3301 L110TB DIMD H60	•		•		9,2
33010 0207	3301 L110T DIMD H60	•			•	9,2

67	10.800	161	HME 250
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33010 0005	3301 L160 H60		•			8,9
33010 0007	3301 L160B H60		•			9,2
33010 0016	3301 L160TB H60			•		9,2
33010 0009	3301 L160T H60				•	9,2
33010 0204	3301 L160 DIMD H60	•	•			8,9
33010 0206	3301 L160B DIMD H60	•	•			9,2
33010 0215	3301 L160TB DIMD H60	•		•		9,2
33010 0208	3301 L160T DIMD H60	•			•	9,2

96	15.000	156	HIT 250, HME 400
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3302...



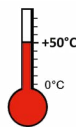
... for ambient temperatures up to +50°C

2 LED segments

33020 0001	3302 L420		•			14,5
33020 0002	3302 L420B		•			14,6
33020 0013	3302 L420TB			•		14,6
33020 0003	3302 L420T				•	14,6
33020 0014	3302 L420TO				•	14,6
33020 0200	3302 L420 DIMD	•	•			14,5
33020 0201	3302 L420B DIMD	•	•			14,6
33020 0212	3302 L420TB DIMD	•		•		14,6
33020 0202	3302 L420T DIMD	•			•	14,6
33020 0213	3302 L420TO DIMD	•			•	14,6

270	40.400	150	2 x HIE 400
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3302...



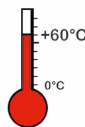
... for ambient temperatures up to +60°C

33020 0004	3302 L220 H60		•			14,5
33020 0006	3302 L220B H60		•			14,6
33020 0015	3302 L220TB H60			•		14,6
33020 0008	3302 L220T H60				•	14,6
33020 0203	3302 L220 DIMD H60	•	•			14,5
33020 0205	3302 L220B DIMD H60	•	•			14,6
33020 0214	3302 L220TB DIMD H60	•		•		14,6
33020 0207	3302 L220T DIMD H60	•			•	14,6

134	21.600	161	HIE 400
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33020 0005	3302 L320 H60		•			14,5
33020 0007	3302 L320B H60		•			14,6
33020 0016	3302 L320TB H60			•		14,6
33020 0009	3302 L320T H60				•	14,6
33020 0204	3302 L320 DIMD H60	•	•			14,5
33020 0206	3302 L320B DIMD H60	•	•			14,6
33020 0215	3302 L320TB DIMD H60	•		•		14,6
33020 0208	3302 L320T DIMD H60	•			•	14,6

192	30.000	156	HIT 400
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* This date is a rough guideline. In individual cases a lighting calculation is required.

Article no.	Type	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Weight [kg] (without packing material)	Connected load [W]	Luminous flux [lm]	Light output [lm/W]	Substitute for *
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3301/3302... IFS



IFS Food/BRC/VDMA/HACCP

SCHUCH Light Fittings designed for food and beverage industry applications are in accordance with IFS Food/BRC/VDMA standards. They can be operated without restrictions in operations that must fulfill the HACCP Concept.

for application in food industry areas

Applications:

Production halls in the food industry, locations which come under the requirements of the IFS Food (International Featured Standard, Food), BRC or HACCP, e.g. manufacture of food packaging.

Design:

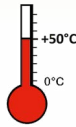
With clear PC cover instead of the flat safety glass.

... for ambient temperatures up to +50°C

1 LED segment

33010 0010	3301 L210 IFS		•			8,9
33010 0011	3301 L210B IFS		•			9,2
33010 0017	3301 L210TB IFS			•		9,2
33010 0012	3301 L210T IFS				•	9,2
33010 0209	3301 L210 DIMD IFS	•	•			8,9
33010 0210	3301 L210B DIMD IFS	•	•			9,2
33010 0216	3301 L210TB DIMD IFS	•		•		9,2
33010 0211	3301 L210T DIMD IFS	•			•	9,2

135	20.200	150	HIE 400
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Optional also available for ambient temperatures up to +60°C



2 LED segments

33020 0010	3302 L420 IFS		•			14,5
33020 0011	3302 L420B IFS		•			14,6
33020 0017	3302 L420TB IFS			•		14,6
33020 0012	3302 L420T IFS				•	14,6
33020 0209	3302 L420 DIMD IFS	•	•			14,5
33020 0210	3302 L420B DIMD IFS	•	•			14,6
33020 0216	3302 L420TB DIMD IFS	•		•		14,6
33020 0211	3302 L420T DIMD IFS	•			•	14,6

270	40.400	150	2 x HIE 400
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3301... ER



for use in cattle and horse stables

Applications:

High stables with greater mounting heights from approx. 6 m.

Design:

With stainless steel eye bolts.

Attention: Fastening ropes, ceiling brackets and wall brackets must be made of stainless steel (on demand).

33010 0600	3301 L210 ER		•			8,9
33010 0602	3301 L210B ER		•			9,2
33010 0603	3301 L210TB ER			•		9,2

135	20.200	150	HIE 400
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3301... LW



for use in pig stalls

Applications:

High stables with greater mounting heights from approx. 6 m as well as environments with high pollution.

Design:

Modified for high protection against ammonia and other corrosive atmospheres or harmful gases.

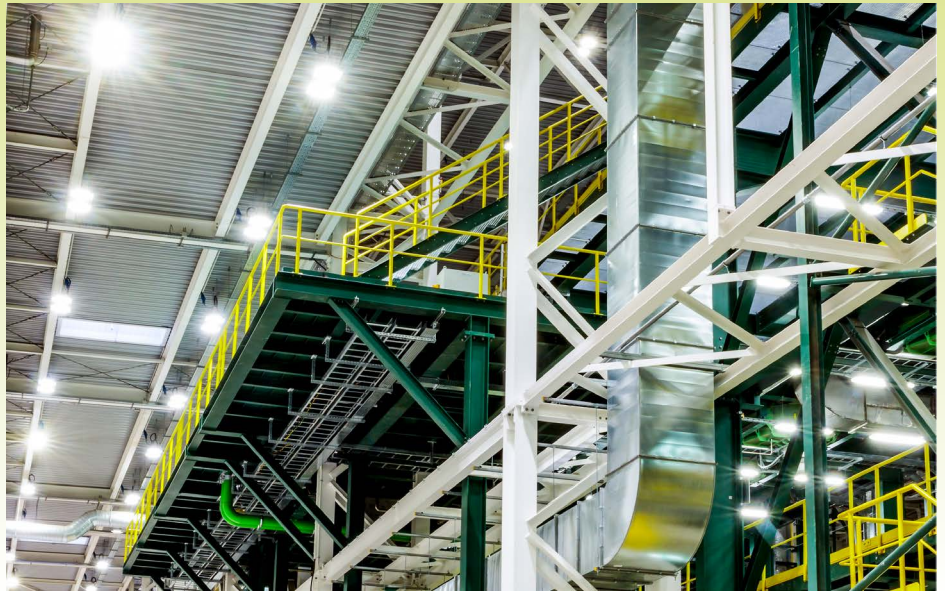
Attention: Fastening ropes, ceiling brackets and wall brackets must be made of stainless steel (on demand).

33010 0800	3301 L210 LW		•			8,9
33010 0801	3301 L210B LW		•			9,2
33010 0802	3301 L210TB LW			•		9,2

135	20.200	150	HIE 400
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* This date is a rough guideline. In individual cases a lighting calculation is required.





Accessories / Spare Parts

Article no.	Type	
33001 9001	ABD 3301	cover, safety glass pane clear (1 segment), for 3301..., 3302..., 3305...
33001 9006	ABD 3301 IFS	cover, disc PC clear IFS (1 segment), for 3301..., 3302..., 3305...
33001 9010	ABD 3301 C	cover, PMMA frosted disc for glare limitation (1 segment), for 3301..., 3302..., 3305...
25600 9000	2560	plastic gland M25x1,5
25720 9000	2572	plastic plug M25x1,5
33001 9004	3301/3302 Y P	1 pair of Y-ropes, (2-point-mounting)
33001 9002	3301/3302 DBF	1 pair of brackets for direct ceiling mounting ¹⁾
33001 9013	3301/3302 SD	vibration absorbing suspension device ¹⁾
¹⁾ Version Sheet Steel painted. Optional available in stainless steel painted.		

NEW

DUEVO MID

LED High Bay Fitting

with variable setting of the luminous flux

Series 3301/3302...



Applications:

Production areas and warehouses, cool storage facilities, walkways in shelve areas, driveways etc.

Design:

Two versions are available: 1 (3301...) or 2 (3302...) LED-segments.

Housing: Die-cast aluminum, DB 702

(mica-iron paint, grey). LED-segment(s) with LED modules, optics behind tempered safety glass (IK10). ECG segment with integrated electronic control gear, prewired on terminals.

Light distribution: Without optics wide beam, with optics wide (B), narrow-wide (TB) or narrow beam (T).

Switch for setting the luminous flux of the luminaire.

Entries: 1 gland and 1 blind plug M25 x 1,5.

Mounting: 4 eyelets M6 included in delivery.

Technical Data:

LED module: 4,000K, CRI > 80, service life $L_{80} > 100,000h$ at 25°C ambient temperature, service life $L_{70} > 100,000h$ at max. ambient temperature, Zhaga compliant

ECG: 220-240V, 50/60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): via 230V control input. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimming levels possible.

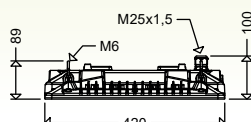
Digital dimming with DALI interface (DIMD) compatible with LIMAS Line and LIMAS Air Light Management System in combination with a FastConnect quick connector.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

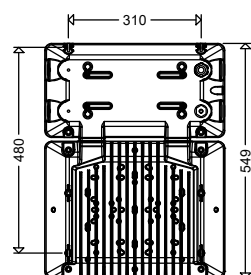
Ambient temperature: -20°C up to +50°C

Options:

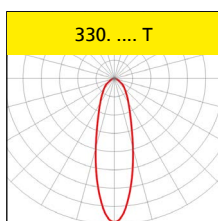
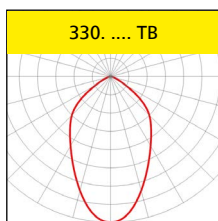
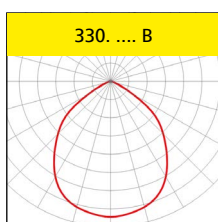
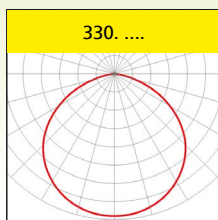
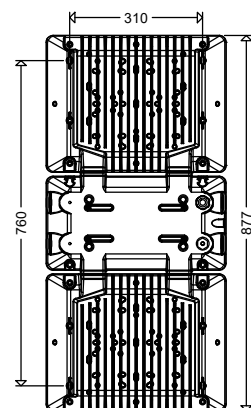
- 5,000K, light colour 850
- PMMA cover frosted (C) for glare limitation
- increased (ER) protection against corrosive atmospheres
- Version with additional threaded holes for swivel arm brackets (swivel range 0° - 45°)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- additional overvoltage protection (OP)
- cable looping (RR)
- various additional cable entries on ceiling and front side
- FastConnect for electrical connection without accessing the internal terminal block



3301...



3302...



Product highlights:

- one type replace several conventional lights and thus reduce the variety of types
- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- high system service life of up to 100,000h at maximum ambient temperature
- optimized thermal management due to direct mounting of the LED modules to the housing and separate housings for ECG- and LED-modules, huge heat sink with excellent heat dissipation
- high quality ECG with overload and short circuit protection
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping. No dark zones if any single LED would fail. The uniformity of the illumination is kept.
- colour rendering index CRI > 80
- variable electrical installation methods due to max. 8 cable entries (see options)
- ⚠-symbol, suitable for rooms with increased fire risk
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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3301... VARIO



1 LED segment



33011 0001	3301 L210 VARIO
33011 0002	3301 L210B VARIO
33011 0003	3301 L210TB VARIO
33011 0004	3301 L210T VARIO

67 - 135	10.800 - 20.200	161	HME 250 - HIE 400	9,2
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3302... VARIO



2 LED segments



33021 0001	3302 L420 VARIO
33021 0002	3302 L420B VARIO
33021 0003	3302 L420TB VARIO
33021 0004	3302 L420T VARIO

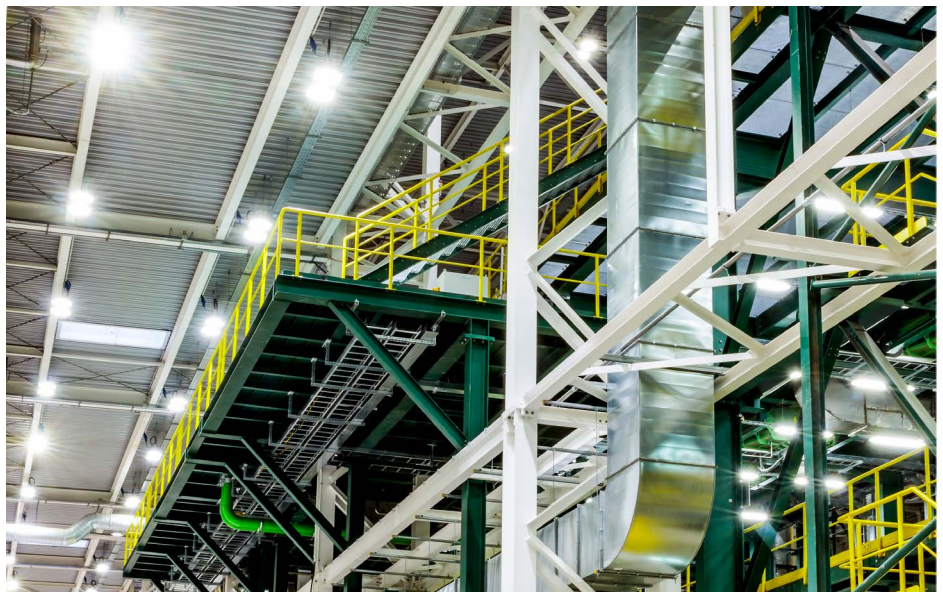
134 - 270	21.600 - 40.400	161	HIE 400 - 2 x HIE 400	14,6
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Factory setting L210: 67 W; replaces approx. ca. HME 250

1) possible setting range

Factory setting L420: 134 W; replaces approx. HIE 400

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

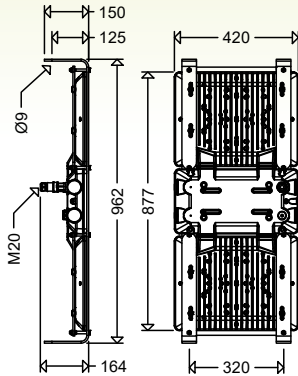
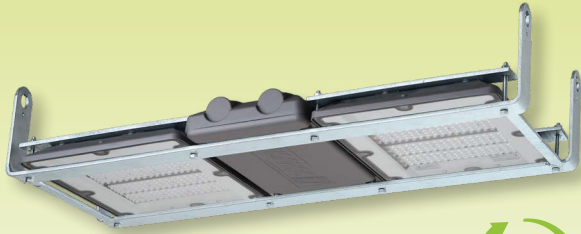


High Bay
Fittings

Accessories / Spare Parts

Article no.	Type	
33001 9001	ABD 3301	cover, safety glass pane clear (1 segment), for 3301..., 3302..., 3305...
33001 9006	ABD 3301 IFS	cover, disc PC clear IFS (1 segment), for 3301..., 3302..., 3305...
33001 9010	ABD 3301 C	cover, PMMA frosted disc for glare limitation (1 segment), for 3301..., 3302..., 3305...
25600 9000	2560	plastic gland M25x1,5
25720 9000	2572	plastic plug M25x1,5
33001 9004	3301/3302 Y P	1 pair of Y-ropes, (2-point-mounting)
33001 9002	3301/3302 DBF	1 pair of brackets for direct ceiling mounting ¹⁾
33001 9013	3301/3302 SD	vibration absorbing suspension device ¹⁾

¹⁾ Version Sheet Steel painted. Optional available in stainless steel painted.



DUEVO MID LED High Bay Fitting for use in galvanising plants Series 3302... V

Applications:

Specially developed version for use in galvanizing plants.

Design:

Housing: Die-cast aluminum, DB 702 (mica-iron paint, grey).

LED-segments with LED modules, optics behind tempered safety glass (IK10).

ECG segment with integrated electronic control gear, prewired on terminals.

Robust supporting frame with angle profile.

Light distribution: Wide beam without optic, with optics wide (B), narrow-wide (TB) or narrow beam (T).

Connection: Preinstalled 3-pole (DIMD 5-pole) quick-connector (**FastConnect**), plug mounted to the housing, socket included.

Mounting: 4-point suspension.

Technical Data:

LED module: 4,000K, CRI > 80, service life $L_{50} > 100,000h$ at 25°C ambient temperature, service life $L_{70} > 100,000h$ at max. ambient temperature, Zhaga compliant

ECG: 220-240V, 50/60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

Light control: On request, the luminaires are also available with the following configurations:

Digital dimming with DALI interface (DIMD) compatible with LIMAS Line and LIMAS Air Light Management System.

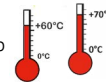
Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -40°C up to +50°C

Options:

- 5,000K, light colour 850

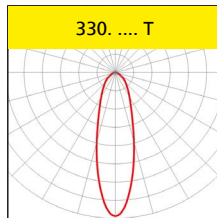
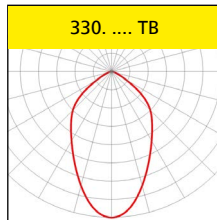
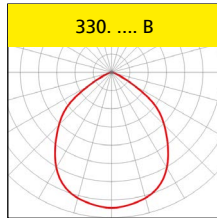
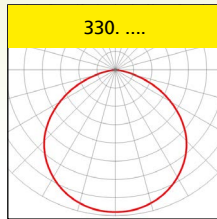
- for high ambient temperatures up to +60°C (H60) or +70°C (H70)



- wireless Light Management System LIMAS Air

Product highlights:

- extremely robust special-version
- high system service life of up to 100,000h at maximum ambient temperature
- high quality ECG with overload and short circuit protection
- optimized thermal management due to direct mounting of the LED modules to the housing and separate housings for ECG- and LED-modules, huge heat sink with excellent heat dissipation
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping. No dark zones if any single LED would fail. The uniformity of the illumination is kept.
- FastConnect quick-connector - electrical connection without opening the fitting
- ∇-symbol, suitable for rooms with increased fire risk
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design



Article no.	Type	dimmable	Wide beam	Narrow wide beam	Narrow beam	Weight [kg] (without packing material)	Connected load [W]	Luminous flux [lm]	Light output [lm/W]	Substitute for *
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3302... V

33020 0100	3302 L420 V		•			23,9	270	40.400	150	2 x HIE 400
33020 0101	3302 L420B V		•			24,0				
33020 0102	3302 L420TB V			•		24,0				
33020 0103	3302 L420T V				•	24,0				
33020 0107	3302 L420 DIMD V	•	•			23,9				
33020 0108	3302 L420B DIMD V	•	•			24,0				
33020 0109	3302 L420TB DIMD V	•		•		24,0				
33020 0110	3302 L420T DIMD V	•			•	24,0				

* This date is a rough guideline. In individual cases a lighting calculation is required.

Accessories / Spare Parts

Type	Article no.	
33001 9001	ABD 3301	cover, safety glass pane clear (1 segment), for 3301..., 3302..., 3305...



Properties, limitations and details for controlling LED-light fittings:
See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.



DUEVO XL MID LED High Bay Fitting Series 3305...

Applications:

Production areas and warehouses, maintenance and assembly shops, cool storage facilities, walkways in rack areas, hardware stores etc.

Design:

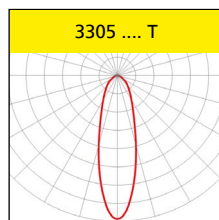
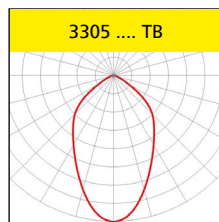
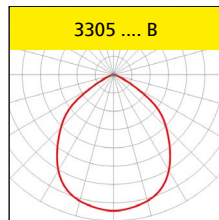
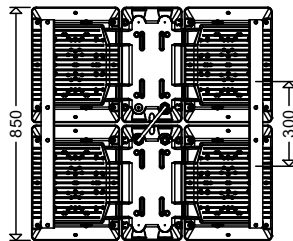
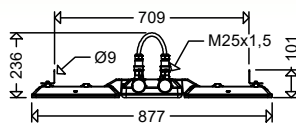
Housing: Die-cast aluminum, DB 702 (mica-iron paint, grey). **4 segments** with LED module, optics behind tempered safety glass (IK10). **2 ECG segments** with integrated electronic control gear, pre-wired on terminals.

Light distribution: With optics wide (B), Narrow-wide (TB) or narrow beam (T).

Entries: 1 gland and 1 blind plug M25 x 1,5.

Mounting: On angle profile with 4 holes Ø 9mm at a distance of 300mm, see accessories.

Delivery status: Multi-part



Technical Data:

LED module: 4,000K, CRI > 80, service life $L_{80} > 100,000$ h at 25°C ambient temperature, service life $L_{70} > 100,000$ h at max. ambient temperature, Zhaga compliant

ECG: 220-240V, 50/60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): via 230V control input. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimming levels possible.

Digital dimming with DALI interface (DIMD) compatible with LIMAS Line and LIMAS Air Light Management System in combination with a FastConnect quick connector.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -25°C up to +50°C / +60°C.

Options:

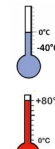
- 5,000K, light colour 850

- PMMA cover frosted (C) for glare limitation

- for low ambient temperatures down to -40°C (T40)

- for high ambient temperatures up to +80°C (H80)

- increased (ER) or high (HR) protection against corrosive atmospheres or harmful gases



- wireless Light Management System LIMAS Air

- for connection to group or central battery systems (ZB) or emergency mains respectively

- additional overvoltage protection (OP)

- cable looping (RR)

- various additional cable entries on ceiling and front side

- **FastConnect quick-connector** for electrical connection without accessing the internal terminal block.

Product highlights:

- high system service life of up to 100.000h at maximum ambient temperature
- efficient substitute for conventional high pressure lamps up to HME 1000W or 2 x HIT 400W
- high quality ECG with overload and short circuit protection
- optimized thermal management due to direct mounting of the LED modules to the housing and separate housings for ECG- and LED-modules, huge heat sink with excellent heat dissipation
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping. No dark zones if any single LED would fail. The uniformity of the illumination is kept.
- colour rendering index CRI > 80
- variable electrical installation methods due to max. 8 cable entries (looping in/out at one end on demand)
- ⚠-symbol, suitable for rooms with increased fire risk
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

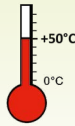
All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Weight [kg] (without packing material)	Connected load [W]	Luminous flux [lm]	Light output [lm/W]	Substitute for *
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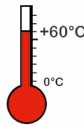
3305...

... for ambient temperatures up to +50°C



33050 0050	3305 L840B					30,3	540	80.800	150	2 x HIT 400, HME 1000
33050 0058	3305 L840TB									
33050 0051	3305 L840T									
33050 0200	3305 L840B DIMD	•	•							
33050 0208	3305 L840TB DIMD	•	•							
33050 0201	3305 L840T DIMD	•	•							

... for ambient temperatures up to +60°C



33050 0052	3305 L440B H60					30,3	268	43.200	161	2 x HIT 250, HME 400
33050 0059	3305 L440TB H60									
33050 0054	3305 L440T H60									
33050 0202	3305 L440B DIMD H60	•	•							
33050 0209	3305 L440TB DIMD H60	•	•				384	60.000	156	2 x HIT 400, HME 1000
33050 0204	3305 L440T DIMD H60	•	•							
33050 0053	3305 L640B H60					30,3				
33050 0060	3305 L640TB H60						384	60.000	156	2 x HIT 400, HME 1000
33050 0055	3305 L640T H60									
33050 0203	3305 L640B DIMD H60	•	•							
33050 0210	3305 L640TB DIMD H60	•	•							
33050 0205	3305 L640T DIMD H60	•	•							



3305... IFS

for application in food industry areas

Applications:

Production halls in the food industry, locations which come under the requirements of the IFS Food (International Featured Standard, Food), BRC, or HACCP, e.g. manufacture of food packaging.

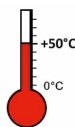
Design:

With clear PC cover instead of the flat safety glass.

Optional also available for ambient temperatures up to +60°C

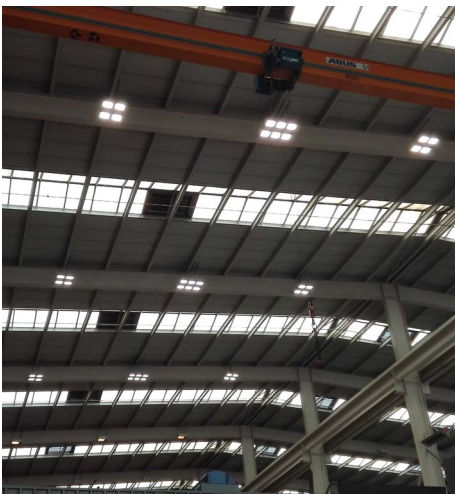


... for ambient temperatures up to +50°C



33050 0056	3305 L840B IFS					26,7	540	80.800	150	2 x HIT 400, HME 1000
33050 0061	3305 L840TB IFS									
33050 0057	3305 L840T IFS									
33050 0206	3305 L840B DIMD IFS	•	•							
33050 0211	3305 L840TB DIMD IFS	•	•							
33050 0207	3305 L840T DIMD IFS	•	•							

* This date is a rough guideline. In individual cases a lighting calculation is required.



Accessories / Spare Parts

Article no.	Type	
33001 9001	ABD 3301	cover, safety glass pane clear (1 segment), for 3301..., 3302..., 3305...
33001 9006	ABD 3301 IFS	cover, disc PC clear IFS (1 segment), for 3301..., 3302..., 3305...
33001 9010	ABD 3301 C	cover, PMMA frosted disc for glare limitation (1 segment), for 3301..., 3302..., 3305...
25600 9000	2560	plastic gland M25x1,5
25720 9000	2572	plastic plug M25x1,5
33001 9012	3305 Y P	1 pair of Y-ropes (2-point-mounting)



TRIANO *disc* LED High Bay Fitting Series 3410/3420/3430...

Applications:

Production and storage halls in trade and industry, maintenance halls, assembly plants, cold rooms, cold stores, hardware stores, rack aisles in warehouses, etc.

Design:

Robust die-cast aluminum body with cooling fins and integrated ECG housing. 1-3 LED-modules with flat safety glasses, Impact resistance IK09. Versions B, TB or T with PC-cover and incorporated optics.

All case parts powder coated in DB 702, smooth, matt.

Light distribution: Without optics wide beam, with optics wide (B), narrow-wide (TB) or narrow beam (T).

Connection: 3-pole (DIMD 5-pole) quick-connector (FastConnect), plug mounted to the ECG-housing, socket included.

Mounting: 1-point suspension, eyelet included.

Delivery status:
1 part, ready for immediate use.

Technical Data:

LED module: 5,000K or 4,000K, CRI > 80, service life L_{80} > 100,000h at 25°C ambient temperature, service life L_{80} > 80,000h at max. ambient temperature
ECG: 220-240V, 50/60Hz, Surge voltage resistance 4kV, overload and short circuit protection.


On request, the luminaires are also available with the following configurations:

Digital dimming with DALI interface (DIMD) compatible with LIMAS Line and LIMAS Air Light Management System.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -20°C up to +45°C/+50°C

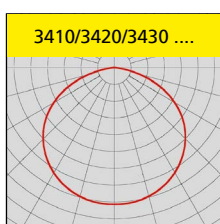
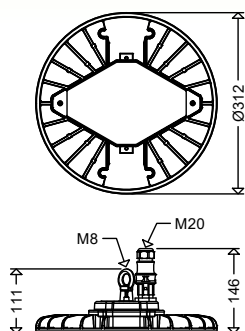
Options:

- for connection to group or central battery systems (ZB) or emergency mains respectively (100% luminous flux in emergency mode)
- ball sports proof version (only Series 3420) 
- PC cover for versions without optics, for use in food areas (IFS Food); (-6% Luminous flux)
- PMMA cover with prismatic structure to limit glare (20% lower luminous flux)
- with swivel bracket for ceiling or wall mounting

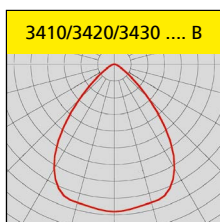
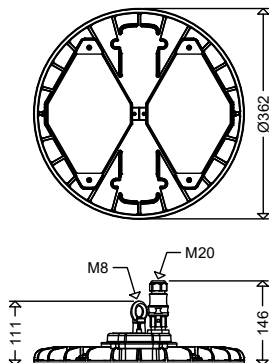
Product highlights:

- fast mounting and commissioning due to 1-point suspension and FastConnect quick-connector
- highly efficient up to 161 lm/W
- Excellent thermal management through cooling fin structure and direct connection of the LED modules to the housing. Huge heat sink, excellent heat dissipation, excellent convection.
- high system service life of up to 100,000h (25°C), >70,000h at maximum ambient temperature
- colour reproduction CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- ∇ -symbol, suitable for rooms with increased fire risk
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- sustainable, control gear and LED-module replaceable by qualified personnel on-site

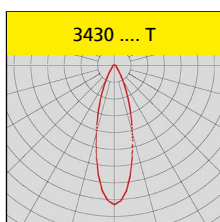
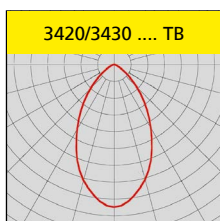
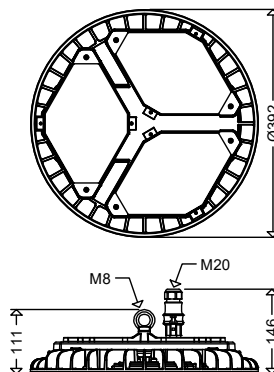
3410 ...



3420 ...



3430 ...



! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.



The versions with optics (B, TB and T) are suitable for use in food areas (IFS/HACCP).

Article no.	Type	dimmable	Wide beam	Narrow wide beam	Narrow beam	Tmax [°C]	Weight [kg] (without packing material)	Connected load [W]	Luminous flux [lm]	Light output [lm/W]	Substitute for *
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3410/3420/3430...

3410...



34100 0001	3410 L100 D		•			50	2,2	65	10.000	154	HME 250
34100 0003	3410 L100B D		•			50	2,1				
34100 0002	3410 L100 D DIMD	•	•			50	2,2				
34100 0004	3410 L100B D DIMD	•	•			50	2,1				

3420...



34200 0001	3420 L200 D		•			45	2,9	123	20.000	163	HIT250, HME 400, HIE 400, (HI-VG)
34200 0003	3420 L200B D		•			45	2,8				
34200 0005	3420 L200TB D			•		45	2,8				
34200 0002	3420 L200 D DIMD	•	•			45	2,9				
34200 0004	3420 L200B D DIMD	•	•			45	2,8				
34200 0006	3420 L200TB D DIMD	•		•		45	2,8				

3430...



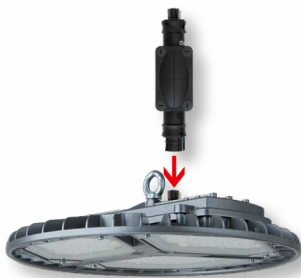
34300 0001	3430 L300 D		•			45	4,2	195	30.000	154	HIE400 (HS-VG), HIT400
34300 0003	3430 L300B D		•			45	4,0				
34300 0005	3430 L300TB D			•		45	4,0				
34300 0007	3430 L300T D				•	45	4,0				
34300 0002	3430 L300 D DIMD	•	•			45	4,2				
34300 0004	3430 L300B D DIMD	•	•			45	4,0				
34300 0006	3430 L300TB D DIMD	•		•		45	4,0				
34300 0008	3430 L300T D DIMD	•			•	45	4,0				

34100 0009	3410 L100 D 840		•			50	2,2	65	10.000	154	HME 250
34100 0011	3410 L100B D 840		•			50	2,1				
34100 0016	3410 L100 D DIMD 840	•	•			50	2,2				
34100 0017	3410 L100B D DIMD 840	•	•			50	2,1				

34200 0016	3420 L200 D 840		•			45	2,9	123	20.000	163	HIT250, HME 400, HIE 400 (HI-VG)
34200 0011	3420 L200B D 840		•			45	2,8				
34200 0015	3420 L200TB D 840			•		45	2,8				
34200 0026	3420 L200 D DIMD 840	•	•			45	2,9				
34200 0012	3420 L200B D DIMD 840	•	•			45	2,8				
34200 0027	3420 L200TB D DIMD 840	•		•		45	2,8				

34300 0020	3430 L300 D 840		•			45	4,2	195	30.000	154	HIE400 (HS-VG), HIT400
34300 0014	3430 L300B D 840		•			45	4,0				
34300 0017	3430 L300TB D 840			•		45	4,0				
34300 0021	3430 L300T D 840				•	45	4,0				
34300 0023	3430 L300 D DIMD 840	•	•			45	4,2				
34300 0016	3430 L300B D DIMD 840	•	•			45	4,0				
34300 0024	3430 L300TB D DIMD 840	•		•		45	4,0				
34300 0025	3430 L300T D DIMD 840	•			•	45	4,0				

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)



3430 L 300 DIMD with LIMAS Air radio module



LIMAS Air FM



LIMAS Air FM MK



LIMAS Air - Smart lighting control

Applications:

Areas where luminaires are to be intelligently controlled to lower operating costs and reduce CO₂ emissions.

Design:

CASAMBI® radio module with FastConnect quick-connector for easy plugging onto DIMD luminaires.

Article No.	Type	
90547 9001	LIMAS Air FM	CASAMBI® radio module with FastConnect quick-connector for controlling DIMD luminaires
90547 9002	LIMAS Air FM MK	CASAMBI® radio module with FastConnect quick-connector and 1m cable

Explanations of the Light Management System LIMAS Air and the system components (sensors, switches, push-buttons, etc.) can be found at the beginning of the chapter „High Bay Fittings“.



Accessories / Spare Parts

Article no.	Type	
34011 9001	ABD 3401	cover, clear safety glass pane (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9003	ABD 3401 PRA	cover, clear PMMA disc with outer prisms (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9002	ABD 3401 IFS	cover, clear PC IFS disc (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9004	ABD 3401 B	cover, clear PC disc, wide beam (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9005	ABD 3401 TB	cover, clear PC disc, narrow-beam wide distribution (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9006	ABD 3401 T	cover, clear PC disc, narrow beam (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...



TRIANO 2nd Generation LED High Bay Fitting Series 3401/3402... G2

Applications:

Production areas and warehouses, maintenance and assembly shops, cool storage facilities, walkways in rack areas, hardware stores etc.

Design:

LED-segment: Robust three-part cast aluminium housing with cooling fins, LED-modules and flat safety glasses (IK09), versions B, TB or T with PC-cover and incorporated optics.

ECG-housing 3401...: Cast aluminium

ECG-housing 3402...: Extruded aluminium with cooling fins. All case parts powder coated in DB 702 (mica-iron paint, grey).

Light distribution: Without optics wide beam, with optics wide (B), narrow-wide (TB) or narrow beam (T).

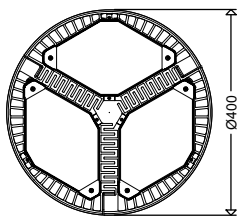
Connection: 3-pole (DIMD 5-pole) quick-connector (**FastConnect**), plug mounted to the housing, socket included.

Mounting: 1-point suspension, eyelet included.

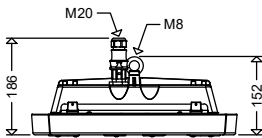
Delivery status:

Series 3402...: 2 parts, LED-segments and ECG-housing.

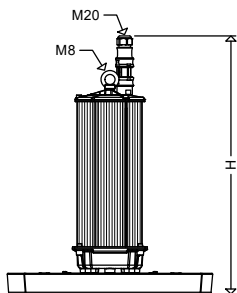
Series 3401...: 1 part



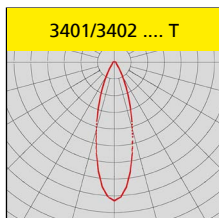
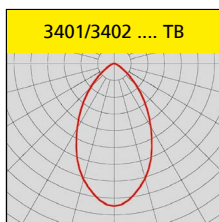
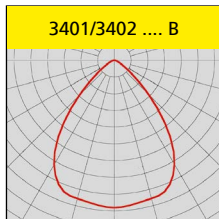
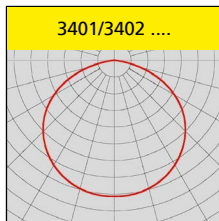
3401 L... G2



3402 L... G2



Series	H [mm]
3402 L180 DIMD	590
3402 L250	510
3402 L250 DIMD	510



Technical Data:

LED module: 5,000K or 4,000K, CRI > 80, service life L_{80} > 100,000h at 25°C ambient temperature, service life L_{80} > 80,000h at max. ambient temperature
ECG: 220-240V, 50/60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:
Digital dimming with DALI interface (DIMD) compatible with LIMAS Line and LIMAS Air Light Management System.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -25°C up to see article tables

Options:

- for connection to group or central battery systems (ZB) or emergency mains respectively
- ball sports proof version (only Series 3402)



- PC cover for application in food industry areas (IFS Food)
- silicone free
- for high ambient temperatures up to +70°C (H70)



Product highlights:

- fast mounting and commissioning due to 1-point suspension and FastConnect quick-connector
- high quality ECG with overload and short circuit protection
- optimized thermal management due to segmentation of the LED modules and direct mounting to the housing. Huge heat sink, excellent heat dissipation, excellent convection
- high system service life of up to 100,000h (25°C), >70,000h at maximum ambient temperature
- colour reproduction CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- ∇ -symbol, suitable for rooms with increased fire risk
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- sustainable, control gear and LED-module replaceable by qualified personnel on-site



! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

The versions with optics (B, TB and T) are suitable for use in food areas (IFS/HACCP).

Article no.	Type	dimmable	Wide beam	Narrow wide beam	Narrow beam	Tmax [°C]	Weight [kg] (without packing material)	Connected load [W]	Luminous flux [lm]	Light output [lm/W]	Substitute for *
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3401/3402... G2



3401...



34010 0100	3401 L120 G2		•			55	6,3	84	13.500	161	HME250
34010 0102	3401 L120 G2 DIMD	•	•			55	6,3				
34010 0101	3401 L180 G2		•			50	6,3	123	20.000	163	HIT 250, HME 400, HIE400 (HI-VG)
34010 0112	3401 L180B G2		•			50	6,1				
34010 0111	3401 L180TB G2			•		50	6,1				
34010 0122	3401 L180T G2				•	50	6,1				
34010 0401	3402 L180 G2 DIMD	•	•			60	8,2				
34010 0414	3402 L180B G2 DIMD	•	•			60	8,0				
34010 0413	3402 L180TB G2 DIMD	•		•		60	8,0				
34010 0432	3402 L180T G2 DIMD	•			•	60	8,0				

3402...



34010 0400	3402 L250 G2		•			45	8,1	198	29.500	149	HIE400 (HS-VG), HIT400
34010 0416	3402 L250B G2		•			45	7,9				
34010 0415	3402 L250TB G2			•		45	7,9				
34010 0433	3402 L250T G2				•	45	7,9				
34010 0402	3402 L250 G2 DIMD	•	•			45	8,1				
34010 0417	3402 L250B G2 DIMD	•	•			45	7,9				
34010 0412	3402 L250TB G2 DIMD	•		•		45	7,9				
34010 0434	3402 L250T G2 DIMD	•			•	45	7,9				



3430 L 300 DIMD with LIMAS Air radio module

34010 0144	3401 L120 G2 840		•			55	6,3	84	13.500	161	HME250
34010 0130	3401 L120 G2 DIMD 840	•	•			55	6,3				
34010 0117	3401 L180 G2 840		•			50	6,3	123	20.000	163	HIT 250, HME 400, HIE400 (HI-VG)
34010 0120	3401 L180B G2 840		•			50	6,1				
34010 0121	3401 L180TB G2 840			•		50	6,1				
34010 0145	3401 L180T G2 840				•	50	6,1				
34010 0431	3402 L180 G2 DIMD 840	•	•			60	8,2				
34010 0476	3402 L180B G2 DIMD 840	•	•			60	8,0				
34010 0444	3402 L180TB G2 DIMD 840	•		•		60	8,0				
34010 0477	3402 L180T G2 DIMD 840	•			•	60	8,0				

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)

LIMAS Air - Smart lighting control

Applications:

Areas where luminaires are to be intelligently controlled to lower operating costs and reduce CO₂ emissions.

Design:

CASAMBI® radio module with FastConnect quick-connector for easy plugging onto DIMD luminaires.



LIMAS Air FM



LIMAS Air FM MK



Article No.	Type	
90547 9001	LIMAS Air FM	CASAMBI® radio module with FastConnect quick-connector for controlling DIMD luminaires
90547 9002	LIMAS Air FM MK	CASAMBI® radio module with FastConnect quick-connector and 1m cable

Explanations of the Light Management System LIMAS Air and the system components (sensors, switches, push-buttons, etc.) can be found at the beginning of the chapter „High Bay Fittings“.

High Bay Fittings



Accessories / Spare Parts

Article no.	Type	
34011 9001	ABD 3401	cover, clear safety glass pane (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9003	ABD 3401 PRA	cover, clear PMMA disc with outer prisms (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9002	ABD 3401 IFS	cover, clear PC IFS disc (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9004	ABD 3401 B	cover, clear PC disc, wide beam (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9005	ABD 3401 TB	cover, clear PC disc, narrow-beam wide distribution (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9006	ABD 3401 T	cover, clear PC disc, narrow beam (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...



TRIANO L

LED High Bay Fitting

Series 3403...

Applications:

Production areas and warehouses, maintenance and assembly shops, cool storage facilities, walkways in rack areas, hardware stores etc.

Design:

LED-segments: Robust four-part cast aluminium housing with cooling fins, LED-modules and flat safety glasses (IK09), versions (B, TB or T) with PC cover with integrated optics.

ECG-housing: Extruded aluminium with cooling fins. All case parts powder coated in DB 702 (mica-iron paint, grey).

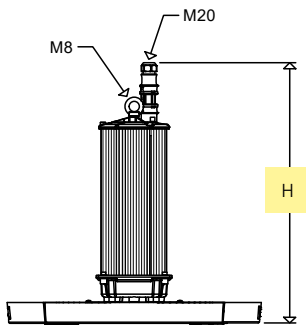
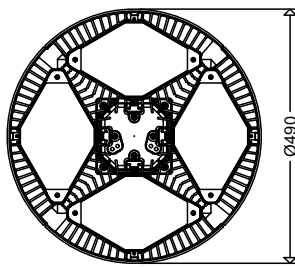
Light distribution: Without optics wide beam, with optics wide (B) narrow-wide (TB) or narrow-beam (T).

Connection: Preinstalled 3-pole (DIMD 5-pole) quick-connector (FastConnect), plug mounted to the housing, socket included.

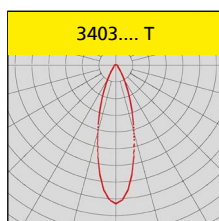
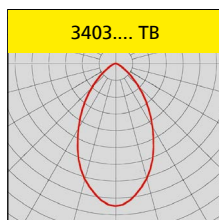
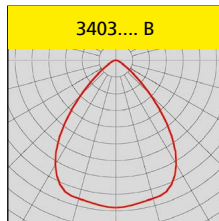
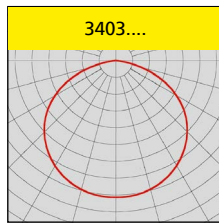
Mounting: 1-point suspension, eyelet included.

Delivery status:

2 parts: LED-segments and ECG-housing



Series	H [mm]
3403 ...	510
3403 L260.. DIMD	590
3403 L380.. DIMD	590



Technical Data:

LED module: 5,000K or 4,000K, CRI > 80, service life L_{80} > 100,000h at 25°C ambient temperature, service life L_{80} > 80,000h at max. ambient temperature

ECG: 220-240V, 50/60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): via 230V control input. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimming levels possible.

Digital dimming with DALI interface (DIMD) compatible with LIMAS Line and LIMAS Air Light Management System.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -25°C up to see article tables

Options:

- for connection to group or central battery systems (ZB) or emergency mains respectively
- PC cover for application in food industry areas (IFS Food)

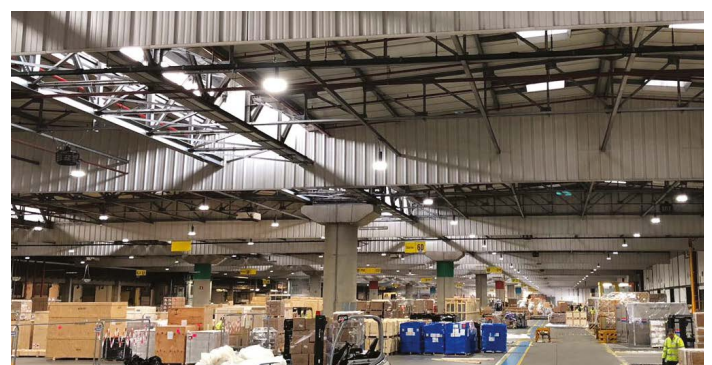
- silicone free

- for high ambient temperatures to +70°C (H70)



Product highlights:

- fast mounting and commissioning due to 1-point suspension and FastConnect quick-connector
- high quality ECG with overload and short circuit protection
- optimized thermal management due to segmentation of the LED modules and direct mounting to the housing. Huge heat sink, excellent heat dissipation, excellent convection
- high system service life of up to 100,000h (25°C), >70,000h at maximum ambient temperature
- colour reproduction $R_a > 80$, according to the workplace guide lines suitable for nearly all plant locations
- ∇ -symbol, suitable for rooms with increased fire risk
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- sustainable, control gear and LED-module replaceable by qualified personnel on-site



Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

The versions with optics (B, TB and T) are suitable for use in food areas (IFS/HACCP).

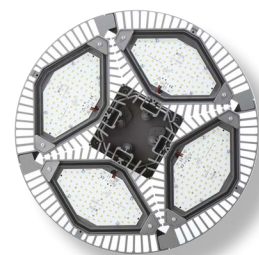
Article no.	Type	dimmable	Wide beam	Narrow wide beam	Narrow beam	Tmax [°C]	Weight [kg] (without packing material)	Connected load [W]	Luminous flux [lm]	Light output [lm/W]	Substitute for *
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3403...



34030 0001	3403 L260		•			60	8,9	166	27.000	163	HIE 400 (HS-VG), HIT 400
34030 0003	3403 L260B		•			60	8,9				
34030 0004	3403 L260TB			•		60	8,9				
34030 0008	3403 L260T				•	60	8,9				
34030 0200	3403 L260 DIMD	•	•			60	8,9				
34030 0202	3403 L260B DIMD	•	•			60	8,9				
34030 0203	3403 L260TB DIMD	•		•		60	8,9				
34030 0206	3403 L260T DIMD	•			•	60	8,9				
34030 0002	3403 L380		•			50	8,9	256	39.500	154	HME 700, HPI 400
34030 0005	3403 L380B		•			50	8,9				
34030 0006	3403 L380TB			•		50	8,9				
34030 0009	3403 L380T				•	50	8,9				
34030 0201	3403 L380 DIMD	•	•			50	9,7				
34030 0204	3403 L380B DIMD	•	•			50	9,7				
34030 0205	3403 L380TB DIMD	•		•		50	9,7				
34030 0207	3403 L380T DIMD	•			•	50	9,7				
34030 0031	3403 L260 840		•			60	8,9	166	27.000	163	HIE 400 (HS-VG), HIT 400
34030 0020	3403 L260B 840		•			60	8,9				
34030 0011	3403 L260TB 840			•		60	8,9				
34030 0022	3403 L260T 840				•	60	8,9				
34030 0209	3403 L260 DIMD 840	•	•			60	8,9				
34030 0215	3403 L260B DIMD 840	•	•			60	8,9				
34030 0216	3403 L260TB DIMD 840	•		•		60	8,9				
34030 0217	3403 L260T DIMD 840	•			•	60	8,9				
34030 0032	3403 L380 840		•			50	8,9	256	39.500	154	HME 700, HPI 400
34030 0017	3403 L380B 840		•			50	8,9				
34030 0024	3403 L380TB 840			•		50	8,9				
34030 0033	3403 L380T 840				•	50	8,9				
34030 0218	3403 L380 DIMD 840	•	•			50	9,7				
34030 0208	3403 L380B DIMD 840	•	•			50	9,7				
34030 0219	3403 L380TB DIMD 840	•		•		50	9,7				
34030 0220	3403 L380T DIMD 840	•			•	50	9,7				

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)



Excellent thermal management by unique design!

Each LED-Segment is completely surrounded by a highly efficient cooling fin structure. Such design creates a permanent air flow within the LED-Segments. It cools perfectly and avoids dust deposit that could prevent heat dissipation.

Outcome: Operation in high ambient temperature environment plus long life cycle.



LIMAS Air FM



LIMAS Air FM MK



LIMAS Air - Smart lighting control

Applications:

Areas where luminaires are to be intelligently controlled to lower operating costs and reduce CO₂ emissions.

Design:

CASAMBI® radio module with FastConnect quick-connector for easy plugging onto DIMD luminaires.

Article No.	Type	
90547 9001	LIMAS Air FM	CASAMBI® radio module with FastConnect quick-connector for controlling DIMD luminaires
90547 9002	LIMAS Air FM MK	CASAMBI® radio module with FastConnect quick-connector and 1m cable

Explanations of the Light Management System LIMAS Air and the system components (sensors, switches, push-buttons, etc.) can be found at the beginning of the chapter „High Bay Fittings“.

Accessories / Spare Parts

Article no.	Type	
34011 9001	ABD 3401	cover, clear safety glass pane (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9003	ABD 3401 PRA	cover, clear PMMA disc with outer prisms (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9002	ABD 3401 IFS	cover, clear PC IFS disc (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9004	ABD 3401 B	cover, clear PC disc, wide beam (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9005	ABD 3401 TB	cover, clear PC disc, narrow-beam wide distribution (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...
34011 9006	ABD 3401 T	cover, clear PC disc, narrow beam (1 segment), for 3401..., 3402..., 3403..., 3410..., 3420..., 3430...



TRIANO XL

LED High Bay Fitting

Series 3405...

Applications:

Indoor areas with high mounting heights or with a requirement for high illumination levels. E.g. shipyards, hangars, machine-, maintenance- and assembly shops, hardware stores etc..

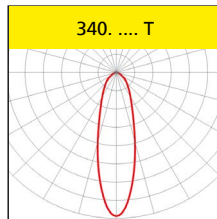
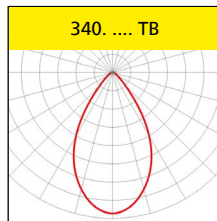
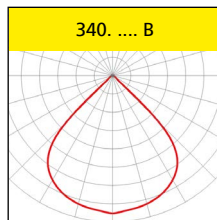
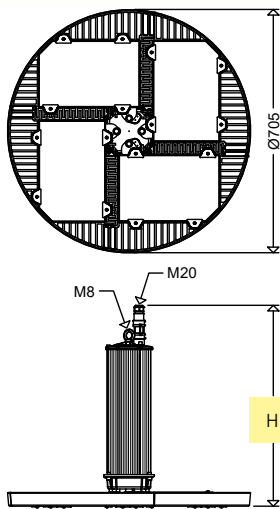
Design:

LED-segments: Robust four-part extruded aluminium housing with cooling fins, LED-modules and flat safety glasses (IK09)
All case parts powder coated in DB 702 (mica-iron paint, grey).

ECG-housing: Extruded aluminium with cooling fins.

Light distribution: With optics wide (B), narrow-wide (TB) or narrow beam (T).

Connection: 3-pole (DIMD 5-pole) quick-connector (**FastConnect**). Plug mounted to the housing.
Socket included
Mounting: 1-point suspension, eyelet included.
Delivery status:
2 parts: LED-segments and **ECG**-housing.



Technical Data:

LED module: 4,000K, CRI > 80, service life $L_{80} > 100,000h$ at 25°C ambient temperature, service life $L_{70} > 100,000h$ at max. ambient temperature, Zhaga compliant

ECG: 220-240V, 50/60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): via 230V control input. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimming levels possible.

Digital dimming with DALI interface (DIMD) compatible with LIMAS Line and LIMAS Air Light Management System.

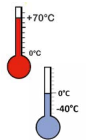
Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -25°C up to +50°C / +60°C

Options:


- 5,000K, light colour 850, e.g. in combination with LED high bay light fittings TRIANO or TRIANO L
- PC cover for application in food industry areas (IFS Food)
- silicone free

- for high ambient temperatures up to +70°C (H70)
- for low ambient temperatures down to -40°C (T40)



Series	H [mm]
3405 ...	510
3405 ... DIMD	590

Product highlights:

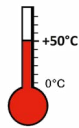
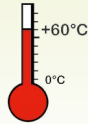
- efficient 1 : 1 - substitute for conventional high bay fittings with 1 x HME 1000W or 2 x HIT 400W
- fast mounting and commissioning due to 1-point suspension and FastConnect quick-connector
- high quality, durable ECG with overload and short circuit protection
- optimized thermal management due to segmentation of the LED modules and direct mounting to the housing. Huge heat sink, excellent heat dissipation, excellent convection
- high expectancy of life > 100.000 hours at maximum admissible ambient temperature
- colour reproduction CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- -symbol, suitable for rooms with increased fire risk
- uniform illumination due to the „Multi-Layer Technology“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

! Properties, limitations and details for controlling LED-light fittings:
See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Tmax [°C]	Weight [kg] (without packing material)	Connected load [W]	Luminous flux [lm]	Light output [lm/W]	Substitute for *
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3405...



34050 0050	3405 L340B	•				60	19,8
34050 0056	3405 L340TB		•			60	19,8
34050 0053	3405 L340T			•		60	19,8
34050 0200	3405 L340B DIMD	•	•			60	20,4
34050 0206	3405 L340TB DIMD	•		•		60	20,4
34050 0203	3405 L340T DIMD	•			•	60	20,4

200	32.000	160	HIT 400
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34050 0051	3405 L470B		•			60	19,8
34050 0057	3405 L470TB			•		60	19,8
34050 0054	3405 L470T				•	60	19,8
34050 0201	3405 L470B DIMD	•	•			60	20,4
34050 0207	3405 L470TB DIMD	•		•		60	20,4
34050 0204	3405 L470T DIMD	•			•	60	20,4

285	45.000	158	HIT 400, HME 700
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34050 0052	3405 L630B		•			50	19,8
34050 0058	3405 L630TB			•		50	19,8
34050 0055	3405 L630T				•	50	19,8
34050 0202	3405 L630B DIMD	•	•			50	20,4
34050 0208	3405 L630TB DIMD	•		•		50	20,4
34050 0205	3405 L630T DIMD	•			•	50	20,4

405	60.000	148	2 x HIT 400, HME 1000
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* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)



LIMAS Air FM



LIMAS Air FM MK



LIMAS Air - Smart lighting control

Applications:

Areas where luminaires are to be intelligently controlled to lower operating costs and reduce CO₂ emissions.

Design:

CASAMBI® radio module with FastConnect quick-connector for easy plugging onto DIMD luminaires.

Explanations of the Light Management System LIMAS Air and the system components (sensors, switches, push-buttons, etc.) can be found at the beginning of the chapter „High Bay Fittings“.

Article No.	Type	
90547 9001	LIMAS Air FM	CASAMBI® radio module with FastConnect quick-connector for controlling DIMD luminaires
90547 9002	LIMAS Air FM MK	CASAMBI® radio module with FastConnect quick-connector and 1m cable

Explanations of the Light Management System LIMAS Air and the system components (sensors, switches, push-buttons, etc.) can be found at the beginning of the chapter „High Bay Fittings“.



Accessories / Spare Parts

Article no.	Type	
34011 9011	ABD 3405	cover, clear safety glass pane, for 3405...



FOCO L / XL LED Floodlight for sand/glass blasting area Series 7700... SSK / 7800... SSK

Application:

Blasting cubicles and areas in which products are sand and glasspearl blasted

Design:

Housing: Die-cast aluminium, 2-parts, powder coated DB 702 (mica-iron paint, grey).

Upper part: With LED- and optic-modules

Lower part: With electronic ballast, glass cover, cable entry with cable relief, retractable.

Glass: Flat safety glass pane, resistant to temperature changes, impact resistant

IK10. Additionally, one easy replaceable polycarbonate protective cover in a stainless steel frame in front of the glass pane, silicone gasket.

Light distribution: Narrow-wide

Connection: 3-pole terminal, max. clamping range 2,5 mm².

Cable entry: 2 cable entries M20 x 1.5 (1 cable gland and 1 screw plug).

Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting.

Electrical design:

LED module: 4,000K, $R_a > 80$, service life $L_{80} > 100,000h$ at 25°C ambient temperature, service life $L_{70} > 100,000h$ at max. ambient temperature, Zhaga compliant

ECG: 220-240V, 50/60Hz, Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

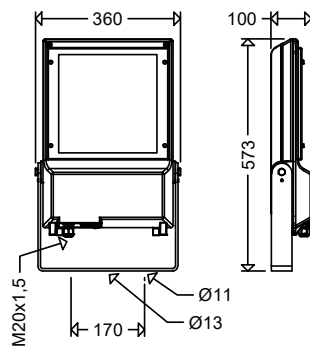
Digital dimming with DALI interface (DIMD) compatible with Light Management System LIMAS Line and LIMAS Air (MK) in combination with FastConnect quick- connector

Ambient temperature: -40°C up to +40°C

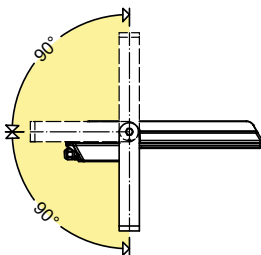
Options:

- various other light distributions e. g. TB (narrow-wide beam) and T (narrow beam) available
- special painting in all RAL colours

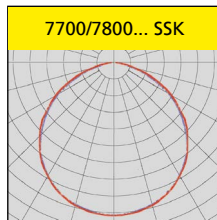
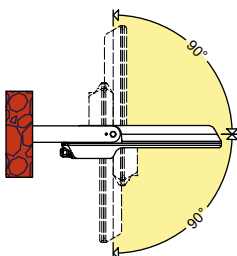
Series 7700... SSK



Swivel range



Standard Mounting



Product highlights:

- Reliable protection of the safety glass against damage and „blindness“ due to blasting material
- ECG with surge voltage resistance, reliable due to overload, short-circuit and overheating protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- optimal light distribution due to highly efficient optics
- ∇ -symbol, suitable for rooms with increased fire risk
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [ca. kg] (without packaging)
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7700... SSK



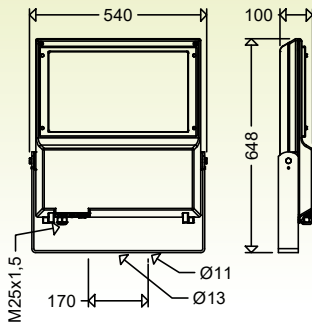
77005 0001	7700 L100 SSK	70	9.220	132	10,0
77005 0002	7700 L150 SSK	106	13.780	130	10,4
77005 0003	7700 L210 SSK	140	17.770	127	10,5

! Properties, limitations and details for controlling LED-light fittings:

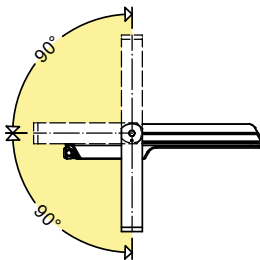
■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

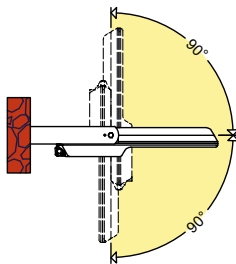
Series 7800... SSK



Swivel range



Standard Mounting



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [ca. kg] (without packaging)
-------------	------	--------------------	--------------------	--------------------------	-------------------------------------

7800... SSK



78005 0001	7800 L420 SSK	280	36.720	131	18,0
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High Bay
Fittings

Accessories / Spare Parts

Article no.	Type	
78001 9003	ABD 7700 SSK	cover, disc PC clear SSK, for 7700... SSK
78001 9002	ABD 7700	cover, clear safety glass pane, for 7700...
78001 9004	ABD 7800 SSK	cover, clear PC pane SSK, for 7800... SSK
78001 9001	ABD 7800	cover, clear safety glass pane, for 7800...
90120 9011	2530	plastic cable gland M20 x 1,5 black for 7700
90121 9008	2600	plastic plug M20 x 1,5 black for 7700
90117 9000	2537	plastic cable gland M25 x 1,5 black for 7800
90118 9000	2538	plastic plug M25 x 1,5 black for 7800



Outdoor Light Fittings

LED technology expands the scope

Since the first outdoor light fitting was produced in 1906, this area of production has become an integral part of the SCHUCH manufacturing program.

With this extremely long experience, SCHUCH now offers a wide range of technical and decorative LED light fittings which provide cost-effective lighting for streets, roads and squares, in compliance to the standards.

A good outdoor light fitting shall meet various requirements. It shall provide visibility conditions according to the standards, be photometrically optimized, be easy to install and maintain, and have a long service life.

With its design, a light fitting shall harmonically fit in the environment or set deliberately individual accents.

Economic efficiency and environmental compatibility have achieved new heights due to LED technology. In this regard, modern LED light fittings set completely new standards.

FROM OUTDOOR LIGHT FITTINGS WITH INCANDESCENT LAMPS TO OUTDOOR LED LIGHT FITTINGS

1906

Production of first street light fittings for incandescent lamps

1912

The outdoor lighting range has developed into a remarkable size and variety. Cast lid fittings for metal filament lamps, spherical light fittings and wall light fittings with cut glass are just as much a part of this as street lighting fixtures with reflectors and a large number of brackets and wall arms with elaborate decorations.

1935/1936

The "elegant and inexpensive" Type 10538 is the first modern mushroom-shaped top luminaire for parks and commercial gardens.

1949

Street light fittings for mercury vapor lamps were included in the manufacturing program.

1957

Production of the first street light fitting with a housing made of fiberglass-reinforced polyester using own "PREPEG".

1985

Production start of legendary street light fittings Series 43 and 44.



Outdoor Light Fittings

Product	Series	Page
Technical outdoor light fittings		
VIA	51/52...	154-167
• variable setting of luminous flux	... VARIO	156/163
• Ready for Lightmanagement	... RFL	158/165
CAMINO	48/47...	168-182
• variable setting of luminous flux	... VARIO	170/178
• Ready for Lightmanagement	... RFL	172/180
• for pedestrian crossings	... FUE	177
FILOS VARIO	42 VARIO	183-188
LUCA VARIO	46 G2 VARIO	189-190
Rope supported		
PENDO	59/49...	191-202
• variable setting of luminous flux	... VARIO	193/199
• Ready for Lightmanagement	... RFL	195/201
Decorative outdoor light fittings		
Pole-top light fittings Generation 2 BlackEdition		
KONIC	544... G2	203-208
• variable setting of luminous flux	... VARIO	205-206
• Ready for Lightmanagement	... RFL	207-208
CUPINA	556... G2	209-212
• variable setting of luminous flux	... VARIO	211-212
PLANEO	557... G2	213-216
• variable setting of luminous flux	... VARIO	215-216
CILA	558... G2	218-220
• variable setting of luminous flux	... VARIO	219-220
CAPA	541... G2	221-224
• variable setting of luminous flux	... VARIO	213-224
RETRO	543... G2	225-228
• variable setting of luminous flux	... VARIO	227-228
RETRO Z	553... G2	229-232
• variable setting of luminous flux	... VARIO	231-232
Pendant light fittings		
BELLA - VARIO	564/565... G2	233-236
• variable setting of luminous flux	... VARIO	235-236
Plane surface floodlights		
FOCO VARIO	7600... VARIO	237-240
• Ready for Lightmanagement	... RFL	239-240
FOCO L	7700...	241-248
• variable setting of luminous flux	... VARIO	243-244
• Ready for Lightmanagement	... RFL	245-248
FOCO XL	7800...	249-255
• variable setting of luminous flux	... VARIO	251-252
• Ready for Lightmanagement	... RFL	253-255
Large-Area Spotlight		
AREALO	7850	256-259
Internal pole mounting unit	7850... ME...	258
External pole mounting unit	7850... MA...	259
Lightmanagement LIMAS Air		261
smart radio-based lighting control		
Pole arm carriers		
		262
Pole-top brackets / Reducing Adapters		
		263

LED TECHNOLOGY

2009

First LED street light fittings were manufactured at the plant in Worms.

2011-2014

Production of first die-cast aluminium street light fittings (Series 47). Until 2014, the production range will be continuously expanded to include LED rope light fittings, LED floodlights and LED plane surface floodlights.

2015-2017

Introduction of the decorative LED-Street-Light-Fittings KONIC, CUPINA and PLANEO

2016

The lighting becomes smart! Launch of Light-Management-System LIMAS.

2018

With the FILOS VARIO the first LED outdoor light fitting with variable adjustable luminous flux is launched to the market. Due to this big success, the pole

light fittings 47 and 48 VARIO as well as the Plane Surface Floodlight / Floodlight FOCO 7600 VARIO follows in short intervals.

2019

Fit for Future! With the RFL-concept the light fittings are prepared for the subsequent use of light management systems.

2020

The new AREALO large-area LED spotlight for illuminating sports facilities and large areas completes the LED floodlight and spotlight range.

2022/23

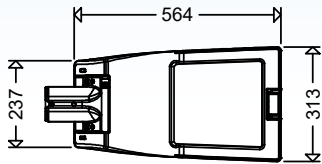
Launch of the GreenLine product line, which stands for outstanding sustainable products. The new VIA is the best example in this category.

2024

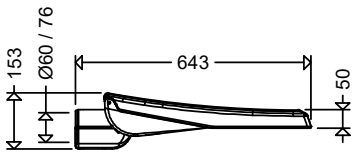
With the BlackEdition series of pole-top light fittings, we are consistently continuing on our path towards sustainable product design.



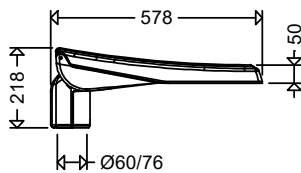
Photo: Andrea Badrutt, Chur



Pole-top installation



Pole-mounted installation



VIA LED Outdoor Light Fitting Series 51...

Applications:

Residential streets, by-roads, traffic-calmed zones, parks, walkways and cycle tracks, pedestrian zones, car parks, gateways

Design:

Housing: Die-cast aluminium, powder coated in DB 702 (mica-iron paint, grey) hinged with lockable safety clip. LED module and ECG mounted on support plates in upper part of housing, exchangeable without tools, disconnectable plug connection. Cable entry with screw connection, strain relief and pressure compensation system in lower part of housing, silicone seal.

Glass cover: Flat safety glass, impact resistance IK09.

Light distribution: Lens optics, asymmetrical wide beam

Central locking: Aluminium

Connection terminal: With disconnect plug connection and strain relief.

Universal-Pole mounting device: Die-cast aluminium, or mast top Ø 60/76mm for pole-top or pole-mounted installation, pre-assembled for pole-top installation with 0° inclination. Separate reducing accessories are required for mast top Ø 42mm.

Inclination setting: For pole-top installation 0°, 5°, 10° and 15° (factory setting 0°), for pole-mounting installation 0°, -5°, -10° and -15° depending on the inclination of the bracket arm, scaling on luminaire housing.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000$ h, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

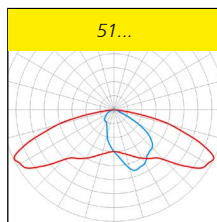
Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722
- (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“
- (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class I (SKI)
- asymmetrical beam (A), plane surface floodlight-optics
- optics for cycle track (RWX)
- low glare optics (ABL)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- with bird deterrence (BD)
- with increased luminous flux up to 15,300lm
- special painting in RAL colours (SL)



Product highlights:

- durable, corrosion-resistant die-cast aluminium housing with flat surface without cooling fins, no dirt build-up.
- can be opened without tools (central locking)
- no uncomfortable „working overhead“, luminaire opens upwards
- universal mast mounting for mast top Ø 60/76mm for post mounting or post-top mounting, pre-mounted on luminaire
- tool-free replacement of ECG (support plate, disconnecting plug, clamping spring)
- tool-free replacement of LED module (support plate, disconnect plug, clamping spring) time- and cost-saving component replacement at end of life
- time- and cost-saving retrofitting in case of further technical development or use of other/warmest light colours
- uniform illumination due to multi-layer technology
- integrated pressure equalisation system prevents condensation in the interior
- eco-friendly, no light emission into the upper half-space, $ULOR=0$
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

! Properties, limitations and details for controlling LED-light fittings:
■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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51...



All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

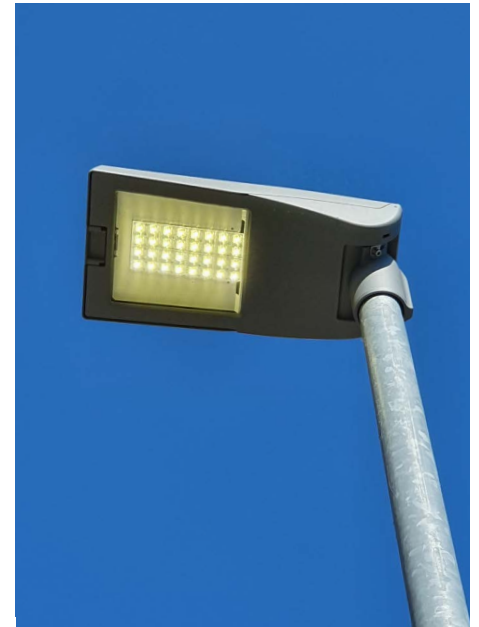
colour temperature 4.000K (light colour 740)

51000 0001	51 0801	9	1.490	166	8,0
51000 0002	51 0802	13	2.080	160	8,0
51000 0003	51 0803	18	2.810	156	8,0
51000 0004	51 1601	17	2.900	171	8,0
51000 0005	51 1602	25	4.050	162	8,0
51000 0006	51 1603	35	5.480	157	8,0
51000 0007	51 2401	26	4.470	172	8,1
51000 0008	51 2402	37	6.200	168	8,1
51000 0009	51 2403	53	8.340	157	8,4
51000 0010	51 3201	34	5.890	173	8,5
51000 0011	51 3202	50	8.170	163	8,5
51000 0012	51 3203	70	10.950	156	8,5

colour temperature 3.000K (light colour 730)

51000 0037	51 0801 730	9	1.420	158	8,0
51000 0038	51 0802 730	13	1.980	152	8,0
51000 0039	51 0803 730	18	2.670	148	8,0
51000 0040	51 1601 730	17	2.760	162	8,0
51000 0041	51 1602 730	25	3.850	154	8,0
51000 0042	51 1603 730	35	5.210	149	8,0
51000 0043	51 2401 730	26	4.250	163	8,1
51000 0044	51 2402 730	37	5.890	159	8,1
51000 0045	51 2403 730	53	7.920	149	8,4
51000 0046	51 3201 730	34	5.600	165	8,5
51000 0047	51 3202 730	50	7.760	155	8,5
51000 0048	51 3203 730	70	10.400	149	8,5

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

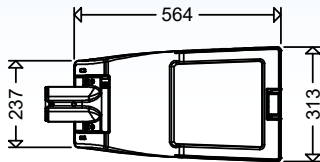


Outdoor
Light Fittings

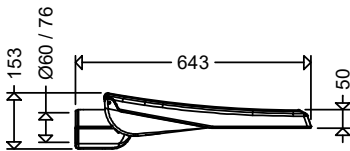
Accessories / Spare Parts

Article No.	Type	
51010 9000	ABD 51	cover, pane safety glas clear, for 51...
90309 0001	RZ 76/42 VIA	adapter for mast top ø of 42mm, black
90113 0016	HA 08/L25 VS	backside light shielding for 51 08..
90113 0017	HA 16/L50 VS	backside light shielding for 51 16..
90113 0018	HA 24/L75 VS	backside light shielding for 51 24..
90113 0019	HA 32/L80/L100 VS	backside light shielding for 51 32..

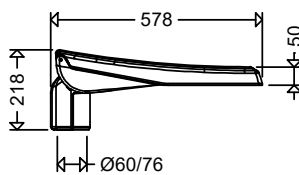
Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.



Pole-top installation



Pole-mounted installation



VIA LED Outdoor Light Fitting with variable setting of the luminous flux Series 51... VARIO

Applications:

Residential streets, by-roads, traffic-calmed zones, parks, walkways and cycle tracks, pedestrian zones, car parks, gateways

Design:

Housing: Die-cast aluminium, powder coated in DB 702 (mica-iron paint, grey) hinged with lockable safety clip. LED module and ECG mounted on support plates in upper part of housing, exchangeable without tools, disconnectable plug connection. Cable entry with screw connection, strain relief and pressure compensation system in lower part of housing, silicone seal.

Glass cover: Flat safety glass, impact resistance IK09.

Switch for setting the luminous flux of the luminaire.

Light distribution: Lens optics, asymmetrical wide beam

Central locking: Aluminium

Connection terminal: With disconnect plug connection and strain relief.

Universal-Pole mounting device: Die-cast aluminium, for mast top Ø 60/76mm for pole-top or pole-mounted installation, pre-assembled for pole-top installation with 0° inclination. Separate reducing accessories are required for mast top Ø 42mm.

Inclination setting: For pole-top installation 0°, 5°, 10° and 15° (factory setting 0°), for pole-mounting installation 0°, -5°, -10° and -15° depending on the inclination of the bracket arm, scaling on luminaire housing.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

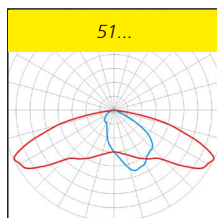
Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- asymmetrical beam (A), plane surface floodlight-optics
- optics for cycle track (RWX)
- low glare optics (ABL)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- with bird deterrence (BD)
- with increased luminous flux up to 15,300lm
- with variable setting of the luminous flux via app (VARIO NFC)
- special painting in RAL colours (SL)



Product highlights:

- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- three types replace several conventional lights and thus **reduce the variety of types**
- durable, corrosion-resistant die-cast aluminium housing with smooth surface without cooling fins, no dirt build-up.
- **can be opened without tools** (central locking)
- **universal mast mounting** for mast top Ø 60/76mm for post mounting or post-top mounting, pre-mounted on luminaire
- easy insertion of cable into connection compartment via cable gland
- **tool-free replacement of ECG and LED module** (support plate, disconnecting plug, clamping spring) time- and cost-saving component replacement at the end of service life, in case of retrofitting due to technical advancement, use of other/ warmer light colours, etc.
- uniform illumination due to multi-layer technology
- integrated pressure equalisation system prevents condensation in the interior
- **eco-friendly**, no light emission into the upper half-space, **ULOR=0**
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the **Dark Sky requirements**
- **sustainable**, control gear and LED-module replaceable by qualified personnel on-site
- **future proof** by using standardized LED-modules (Zhaga)
- **GreenLine luminaire**, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:
See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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51... VARIO



The luminous flux is variably adjustable. The connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

colour temperature 4.000K (light colour 740)

51001 0001	51 L50 VARIO	9 - 35	1.330 - 5.480	172	HST 35 - 2 x HST 70	7,5
51001 0002	51 L100 VARIO	16 - 70	2.720 - 10.950	175	HST 50 - HSE 150	7,6

colour temperature 3.000K (light colour 730)

51001 0004	51 L50 VARIO 730	9 - 35	1.260 - 5.210	163	HST 35 - 2 x HST 70	7,5
51001 0005	51 L100 VARIO 730	16 - 70	2.580 - 10.400	167	HST 50 - HSE 150	7,6

Factory setting L50: 18 W; replaces approx. HME 125, HST 70 Factory setting L100: 54 W; replaces approx. HME 250

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. 1) possible setting range

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Outdoor
Light Fittings

Accessories / Spare Parts

Article No.	Type	
51010 9000	ABD 51	cover, pane safety glas clear, for 51...
90309 0001	RZ 76/42 VIA	adapter for mast top ø of 42mm, black
90113 0017	HA 16/L50 VS	backside light shielding for 51 L50
90113 0019	HA 32/L80/L100 VS	backside light shielding for 51 L100

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Subject to technical changes, misprints and errors.



VIA LED Outdoor Light Fitting Ready for Light Management System Series 51... RFL

Applications:

Residential streets, by-roads, traffic-calmed zones, parks, walkways and cycle tracks, pedestrian zones, car parks, gateways

Design:

The luminaires are prepared for the subsequent use of a light management system. An integrated socket allows retrofitting of light management components without tools.

Housing: Die-cast aluminium, powder coated in DB 702 (mica-iron paint, grey) hinged with lockable safety clip. LED module and ECG mounted on support plates in upper part of housing, exchangeable without tools, disconnectable plug connection. Cable entry with screw connection, strain relief and pressure compensation system in lower part of housing, silicone seal.

Glass cover: Flat safety glass, impact resistance IK09.

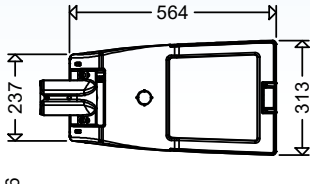
Light distribution: Lens optics, asymmetrical wide beam

Central locking: Aluminium

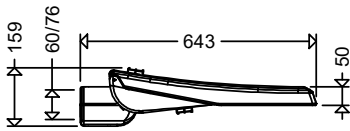
Connection terminal: With disconnect plug connection and strain relief.

Universal-Pole mounting device: Die-cast aluminium, for mast top Ø 60/76mm for pole-top or pole-mounted installation, pre-assembled for pole-top installation with 0° inclination. Separate reducing accessories are required for mast top Ø 42mm.

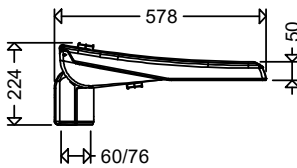
Inclination setting: For pole-top installation 0°, 5°, 10° and 15° (factory setting 0°), for pole-mounting installation 0°, -5°, -10° and -15° depending on the inclination of the bracket arm, scaling on luminaire housing.



Pole-top installation



Pole-mounted installation



Exclusively D4i control gear is being used in RFL luminaires from SCHUCH.

All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from SCHUCH. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

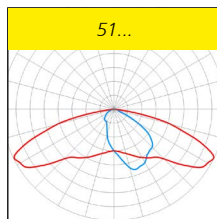
On request, the luminaires are also available with the following configurations:

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class I (SKI)
- optics for cycle track (RWX)
- low glare optics (ABL)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- with bird deterrence (BD)
- with increased luminous flux up to 15,300lm
- special painting in RAL colours (SL)



Product highlights:

- subsequent use of a lighting management system possible at any time
- tool-free, quick assembly of the light management system components
- standardized Zhaga compliant sockets allow free choice of light management system
- durable, corrosion-resistant die-cast aluminium housing with smooth surface without cooling fins, no dirt build-up.
- universal mast mounting for mast top Ø 60/76mm for post mounting or post-top mounting, pre-mounted on luminaire
- tool-free replacement of ECG and LED module (support plate, disconnecting plug, clamping spring) time- and cost-saving component replacement at the end of service life, in case of retrofitting due to technical advancement, use of other/ warmer light colours, etc.
- integrated pressure equalisation system prevents condensation in the interior
- eco-friendly, no light emission into the upper half-space, ULOR=0
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



Stand-alone solution
Can also be used as a stand-alone solution with motion detector.



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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51... RFLO



with a socket on the top side of the luminaire
colour temperature 4.000K (light colour 740)

51003 0001	51 0803 RFLO	18	2.840	158	8,0
51003 0002	51 1603 RFLO	35	5.480	157	8,0
51003 0003	51 2403 RFLO	53	8.340	157	8,4
51003 0004	51 3203 RFLO	70	10.950	156	8,5

colour temperature 3.000K (light colour 730)

51003 0013	51 0803 RFLO 730	18	2.700	150	8,0
51003 0014	51 1603 RFLO 730	35	5.210	149	8,0
51003 0015	51 2403 RFLO 730	53	7.920	149	8,4
51003 0016	51 3203 RFLO 730	70	10.400	149	8,5

51... RFLU



with a socket on the bottom side of the luminaire
colour temperature 4.000K (light colour 740)

51003 0005	51 0803 RFLU	18	2.840	158	8,0
51003 0006	51 1603 RFLU	35	5.480	157	8,0
51003 0007	51 2403 RFLU	53	8.340	157	8,4
51003 0008	51 3203 RFLU	70	10.950	156	8,5

colour temperature 3.000K (light colour 730)

51003 0017	51 0803 RFLU 730	18	2.700	150	8,0
51003 0018	51 1603 RFLU 730	35	5.210	149	8,0
51003 0019	51 2403 RFLU 730	53	7.920	149	8,4
51003 0020	51 3203 RFLU 730	70	10.400	149	8,5

51... RFLOU



with a socket on the top and bottom side of the luminaire
colour temperature 4.000K (light colour 740)

51003 0009	51 0803 RFLOU	18	2.840	158	8,0
51003 0010	51 1603 RFLOU	35	5.480	157	8,0
51003 0011	51 2403 RFLOU	53	8.340	157	8,4
51003 0012	51 3203 RFLOU	70	10.950	156	8,5

colour temperature 3.000K (light colour 730)

51003 0021	51 0803 RFLOU 730	18	2.700	150	8,0
51003 0022	51 1603 RFLOU 730	35	5.210	149	8,0
51003 0023	51 2403 RFLOU 730	53	7.920	149	8,4

Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.

RFL LIMAS HUB3 G2 / RFL LIMAS HUB3 G2 GPS SIM



RFL LIMAS BM RAD HUB LPH max. 8m



RFL LIMAS BM RAD MA LPH max. 10m



RFL DS20 HUB 20lux ON/OFF



RFL BM/DS IR HUB LPH max. 8m



RFL BM/DS IR HUB LPH max. 12m



LIMAS USB-Dongle



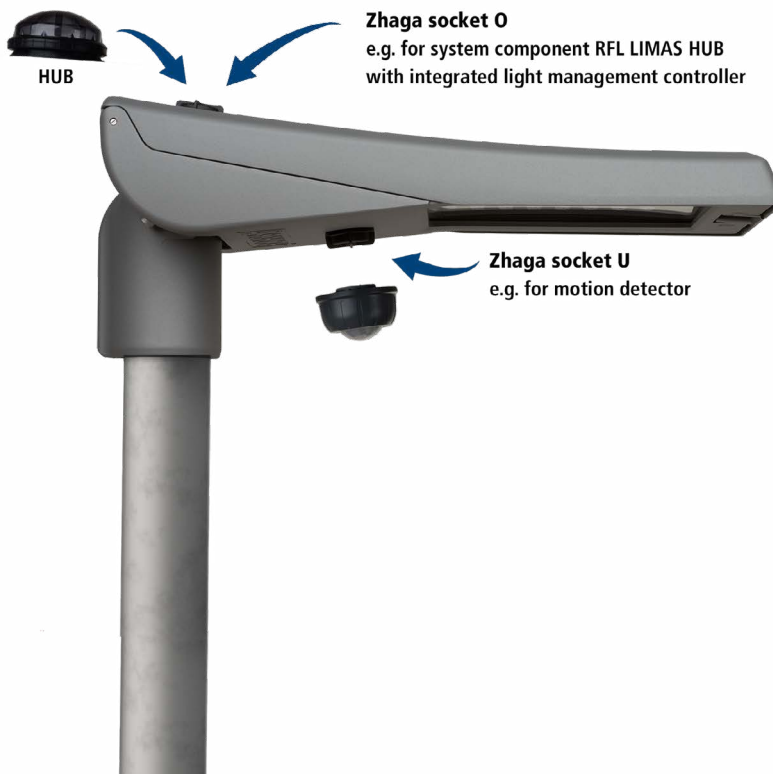
System components

Article No.	Type	
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	radio control with GPS antenna and photocell (twilight control) with integrated SIM card
90546 9014	RFL LIMAS HUB3 G2	radio control with photocell (twilight control)
90546 9011	RFL LIMAS BM RAD HUB LPH max. 8m	radio control with integrated radar motion sensors
90546 9012	RFL LIMAS BM RAD MA LPH max. 10m	radio control with integrated radar motion sensors for pole mounting
90546 9000	RFL DS20 HUB 20lux ON/OFF	twilight switch for autonomous control of RFLO luminaires
90546 9004	RFL BM/DS IR HUB LPH max. 8m	infrared motion sensor - can only be used in conjunction with RFL LIMAS HUB3 G2 and RFL LIMAS HUB3 G2 GPS SIM
90546 9006	RFL BM/DS IR HUB LPH max. 12m	infrared motion sensor / twilight switch - also for standalone operation

Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

Control components

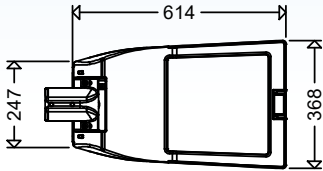
Article No.	Type	
90545 0001	LIMAS Dongle USB	enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	control element with photocell/ twilight switch, GPS antenna and SIM card



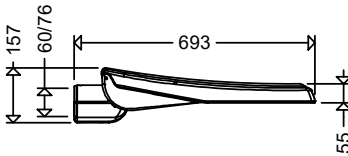
Accessories / Spare Parts

Article No.	Type	
51010 9000	ABD 51	cover, pane safety glas clear, for 51...
90309 0001	RZ 76/42 VIA	adapter for mast top ø of 42mm, black
90113 0016	HA 08/L25 VS	backside light shielding for 51 08..
90113 0017	HA 16/L50 VS	backside light shielding for 51 16..
90113 0018	HA 24/L75 VS	backside light shielding for 51 24..
90113 0019	HA 32/L80/L100 VS	backside light shielding for 51 32..

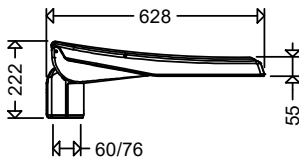
Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.



Pole-top installation



Pole-mounted installation



VIA LED Outdoor Light Fitting Series 52...

Applications:

Side and main streets, roundabouts, factory streets in industrial plants, car parks, gateways etc.

Design:

Housing: Die-cast aluminium, powder coated in DB 702 (mica-iron paint, grey) hinged with lockable safety clip. LED module and ECG mounted on support plates in upper part of housing, exchangeable without tools, disconnectable without tools, disconnectable plug connection. Cable entry with screw connection, strain relief and pressure compensation system in lower part of housing, silicone seal.

Glass cover: Flat safety glass, impact resistance IK09.

Light distribution: Lens optics, asymmetrical wide beam

Central locking: Aluminium

Connection terminal: With disconnect plug connection and strain relief.

Universal-Pole mounting device: Die-cast aluminium, for mast top Ø 60/76mm for pole-top or pole-mounted installation, pre-assembled for pole-top installation with 0° inclination. Separate reducing accessories are required for mast top Ø 42mm.

Inclination setting: For pole-top installation 0°, 5°, 10° and 15° (factory setting 0°), for pole-mounting installation 0°, -5°, -10° and -15° depending on the inclination of the bracket arm, scaling on luminaire housing.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

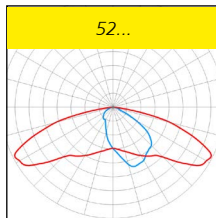
Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class I (SKI)
- asymmetrical beam (A), plane surface floodlight-optics
- low glare optics (ABL)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- with bird deterrence (BD)
- with increased luminous flux up to 25,000lm
- special painting in RAL colours (SL)



Product highlights:

- durable, corrosion-resistant die-cast aluminium housing with flat surface without cooling fins, no dirt build-up.
- can be opened without tools (central locking)
- no uncomfortable „working overhead“, luminaire opens upwards
- universal mast mounting for mast top Ø 60/76mm for post mounting or post-top mounting, pre-mounted on luminaire
- easy insertion of cable into connection compartment via cable gland
- tool-free replacement of ECG (support plate, disconnecting plug, clamping spring)
- tool-free replacement of LED module (support plate, disconnecting plug, clamping spring) time- and cost-saving component replacement at end of life
- time- and cost-saving retrofitting in case of further technical development or use of other/warmest light colours
- uniform illumination due to multi-layer technology
- integrated pressure equalisation system prevents condensation in the interior
- eco-friendly, no light emission into the upper half-space, ULOR=0
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

! Properties, limitations and details for controlling LED-light fittings:

■ See „Technical Supplement“

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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52...



All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

colour temperature 4.000K (light colour 740)

52000 0001	52 3201	34	6.010	177	10,2
52000 0002	52 3202	50	8.350	167	10,2
52000 0003	52 3203	70	11.240	161	10,2
52000 0004	52 4801	52	9.060	174	10,2
52000 0005	52 4802	75	12.550	167	10,2
52000 0006	52 4803	106	16.730	158	10,2
52000 0007	52 6401	69	11.930	173	10,3
52000 0008	52 6402	99	16.490	167	10,3
52000 0009	52 6403	140	21.980	157	10,3

colour temperature 3.000K (light colour 730)

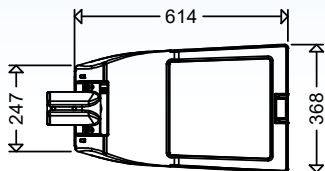
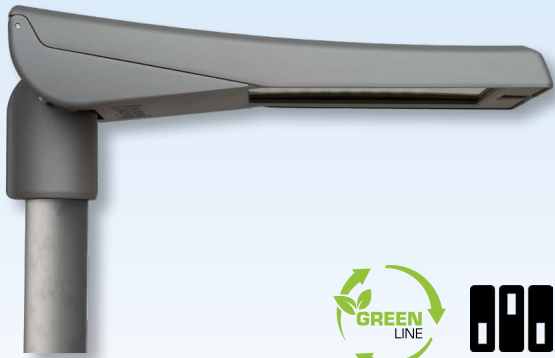
52000 0013	52 3201 730	34	5.710	168	10,2
52000 0014	52 3202 730	50	7.930	159	10,2
52000 0015	52 3203 730	70	10.680	153	10,2
52000 0016	52 4801 730	52	8.610	166	10,2
52000 0017	52 4802 730	75	11.920	159	10,2
52000 0018	52 4803 730	106	15.890	150	10,2
52000 0019	52 6401 730	69	11.330	164	10,3
52000 0020	52 6402 730	99	15.670	158	10,3
52000 0021	52 6403 730	140	20.880	149	10,3

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

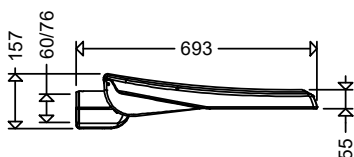
Accessories / Spare Parts

Article No.	Type	
52010 9000	ABD 52	cover, pane safety glas clear, for 52...
90309 0001	RZ 76/42 VIA	adapter for mast top ø of 42mm, black
90113 0019	HA 32/L80/L100 VS	backside light shielding for 52 32..
90113 0020	HA 48/L150 VS	backside light shielding for 52 48..
90113 0021	HA 64/L210 VS	backside light shielding for 52 64..

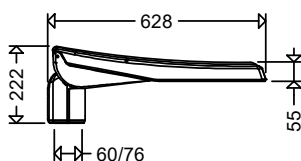
Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.



Pole-top installation



Pole-mounted installation



VIA LED Outdoor Light Fitting with variable setting of the luminous flux Series 52... VARIO

Applications:

Side and main streets, roundabouts, factory streets in industrial plants, car parks, gateways etc.

Design:

Housing: Die-cast aluminium, powder coated in DB 702 (mica-iron paint, grey) hinged with lockable safety clip. LED module and ECG mounted on support plates in upper part of housing, exchangeable without tools, disconnectable plug connection. Cable entry with screw connection, strain relief and pressure compensation system in lower part of housing, silicone seal.

Glass cover: Flat safety glass, impact resistance IK09.

Switch for setting the luminous flux of the luminaire.

Light distribution: Lens optics, asymmetrical wide beam

Central locking: Aluminium

Connection terminal: With disconnect plug connection and strain relief.

Universal-Pole mounting device: Die-cast aluminium, for mast top Ø 60/76mm for pole-top or pole-mounted installation, pre-assembled for pole-top installation with 0° inclination. Separate reducing accessories are required for mast top Ø 42mm.

Inclination setting: For pole-top installation 0°, 5°, 10° and 15° (factory setting 0°), for pole-mounting installation 0°, -5°, -10° and -15° depending on the inclination of the bracket arm, scaling on luminaire housing.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

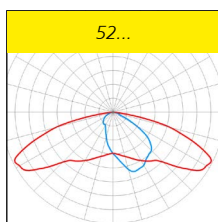
Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- asymmetrical beam (A), plane surface floodlight-optics
- low glare optics (ABL)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- with bird deterrence (BD)
- with increased luminous flux up to 25,000lm
- with variable setting of the luminous flux via app (VARIO NFC)
- special painting in RAL colours (SL)



Product highlights:

- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- three types replace several conventional lights and thus reduce the variety of types
- durable, corrosion-resistant die-cast aluminium housing with smooth surface without cooling fins, no dirt build-up.
- can be opened without tools (central locking)
- universal mast mounting for mast top Ø 60/76mm for post mounting or post-top mounting, pre-mounted on luminaire
- easy insertion of cable into connection compartment via cable gland
- tool-free replacement of ECG and LED module (support plate, disconnecting plug, clamping spring) time- and cost-saving component replacement at the end of service life, in case of retrofitting due to technical advancement, use of other/ warmer light colours, etc.
- uniform illumination due to multi-layer technology
- integrated pressure equalisation system prevents condensation in the interior
- eco-friendly, no light emission into the upper half-space, ULOR=0
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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52... VARIO



The luminous flux is variably adjustable. The connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

colour temperature 4.000K (light colour 740)

52001 0001	52 L100 VARIO	16 - 70	2.770 - 11.240	179	HST 50 - HSE 150	10,2
52001 0002	52 L150 VARIO	24 - 106	4.190 - 16.730	175	2 x HME 80 - 2 x HME 250	10,2
52001 0003	52 L210 VARIO	32 - 140	5.520 - 21.980	173	2 x HST 70 - HME 400	10,3

colour temperature 3.000K (light colour 730)

52001 0005	52 L100 VARIO 730	16 - 70	2.630 - 10.680	170	HST 50 - HSE 150	10,2
52001 0006	52 L150 VARIO 730	24 - 106	3.980 - 15.890	166	2 x HME 80 - 2 x HME 250	10,2
52001 0007	52 L210 VARIO 730	32 - 140	5.240 - 20.880	164	2 x HST 70 - HME 400	10,3

Factory setting L100: 54 W; replaces approx. HME 250

Factory setting L150: 106 W; replaces approx. 2 x HME 250

Factory setting L200: 140 W; replaces approx. HME 400

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



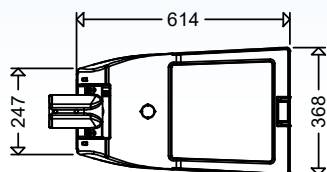
All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

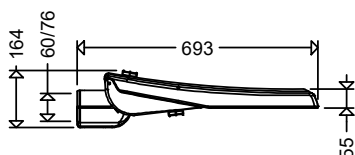
Accessories / Spare Parts

Article No.	Type	
52010 9000	ABD 52	cover, pane safety glas clear, for 52...
90309 0001	RZ 76/42 VIA	adapter for mast top \varnothing of 42mm, black
90113 0019	HA 32/L80/L100 VS	backside light shielding for 52 L100
90113 0020	HA 48/L150 VS	backside light shielding for 52 L150
90113 0021	HA 64/L210 VS	backside light shielding for 52 L210

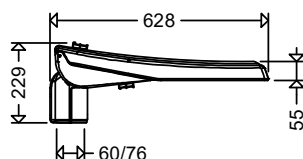
Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.



Pole-top installation



Pole-mounted installation



VIA LED Outdoor Light Fitting Ready for Light Management System Series 52... RFL

Applications:

Side and main streets, roundabouts, factory streets in industrial plants, car parks, gateways etc.

Design:

The luminaires are prepared for the subsequent use of a light management system. An integrated socket allows retrofitting of light management components without tools.

Housing: Die-cast aluminium, powder coated in DB 702 (mica-iron paint, grey) hinged with lockable safety clip. LED module and ECG mounted on support plates in upper part of housing, exchangeable without tools, disconnectable plug connection. Cable entry with screw connection, strain relief and pressure compensation system in lower part of housing, silicone seal.

Glass cover: Flat safety glass, impact resistance IK09.

Light distribution: Lens optics, asymmetrical wide beam

Central locking: Aluminium

Connection terminal: With disconnect plug connection and strain relief.

Universal-Pole mounting device: Die-cast aluminium, for mast top Ø 60/76mm for pole-top or pole-mounted installation, pre-assembled for pole-top installation with 0° inclination. Separate reducing accessories are required for mast top Ø 42mm.

Inclination setting: For pole-top installation 0°, 5°, 10° and 15° (factory setting 0°), for pole-mounting installation 0°, -5°, -10° and -15° depending on the inclination of the bracket arm, scaling on luminaire housing.



Exclusively D4i control gear is being used in RFL luminaires from SCHUCH.

All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from SCHUCH. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

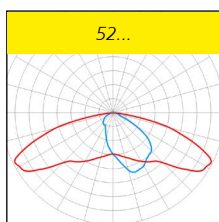
On request, the luminaires are also available with the following configurations:

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class I (SKI)
- low glare optics (ABL)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- with bird deterrence (BD)
- with increased luminous flux up to 25,000lm
- special painting in RAL colours (SL)



Product highlights:

- subsequent use of a lighting management system possible at any time
- tool-free, quick assembly of the light management system components
- standardized Zhaga compliant sockets allow free choice of light management system
- durable, corrosion-resistant die-cast aluminium housing with smooth surface without cooling fins, no dirt build-up.
- universal mast mounting for mast top Ø 60/76mm for post mounting or post-mounting, pre-mounted on luminaire
- tool-free replacement of ECG and LED module (support plate, disconnecting plug, clamping spring) time- and cost-saving component replacement at the end of service life, in case of retrofitting due to technical advancement, use of other/ warmer light colours, etc.
- integrated pressure equalisation system prevents condensation in the interior
- eco-friendly, no light emission into the upper half-space, ULOR=0
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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52... RFLO



with a socket on the top side of the luminaire
colour temperature 4.000K (light colour 740)

52003 0001	52 3203 RFLO	70	11.240	161	10,2
52003 0002	52 4803 RFLO	106	16.730	158	10,2
52003 0003	52 6403 RFLO	140	21.980	157	10,3

colour temperature 3.000K (light colour 730)

52003 0010	52 3203 RFLO 730	70	10.680	153	10,2
52003 0011	52 4803 RFLO 730	106	15.890	150	10,2
52003 0012	52 6403 RFLO 730	140	20.880	149	10,3



Stand-alone solution
Can also be used as a stand-alone solution with motion detector.

52... RFLU



with a socket on the bottom side of the luminaire
colour temperature 4.000K (light colour 740)

52003 0004	52 3203 RFLU	70	11.240	161	10,2
52003 0005	52 4803 RFLU	106	16.730	158	10,2
52003 0006	52 6403 RFLU	140	21.980	157	10,3

colour temperature 3.000K (light colour 730)

52003 0013	52 3203 RFLU 730	70	10.680	153	10,2
52003 0014	52 4803 RFLU 730	106	15.890	150	10,2
52003 0015	52 6403 RFLU 730	140	20.880	149	10,3



52... RFLOU



with a socket on the top and bottom side of the luminaire
colour temperature 4.000K (light colour 740)

52003 0007	52 3203 RFLOU	70	11.240	161	10,2
52003 0008	52 4803 RFLOU	106	16.730	158	10,2
52003 0009	52 6403 RFLOU	140	21.980	157	10,3

colour temperature 3.000K (light colour 730)

52003 0016	52 3203 RFLOU 730	70	10.680	153	10,2
52003 0017	52 4803 RFLOU 730	106	15.890	150	10,2
52003 0018	52 6403 RFLOU 730	140	20.880	149	10,3

! Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.

RFL LIMAS HUB3 G2 / RFL LIMAS HUB3 G2 GPS SIM



RFL LIMAS BM RAD HUB LPH max. 8m



RFL LIMAS BM RAD MA LPH max. 10m



RFL DS20 HUB 20lux ON/OFF



RFL BM/DS IR HUB LPH max. 8m



RFL BM/DS IR HUB LPH max. 12m



LIMAS USB-Dongle



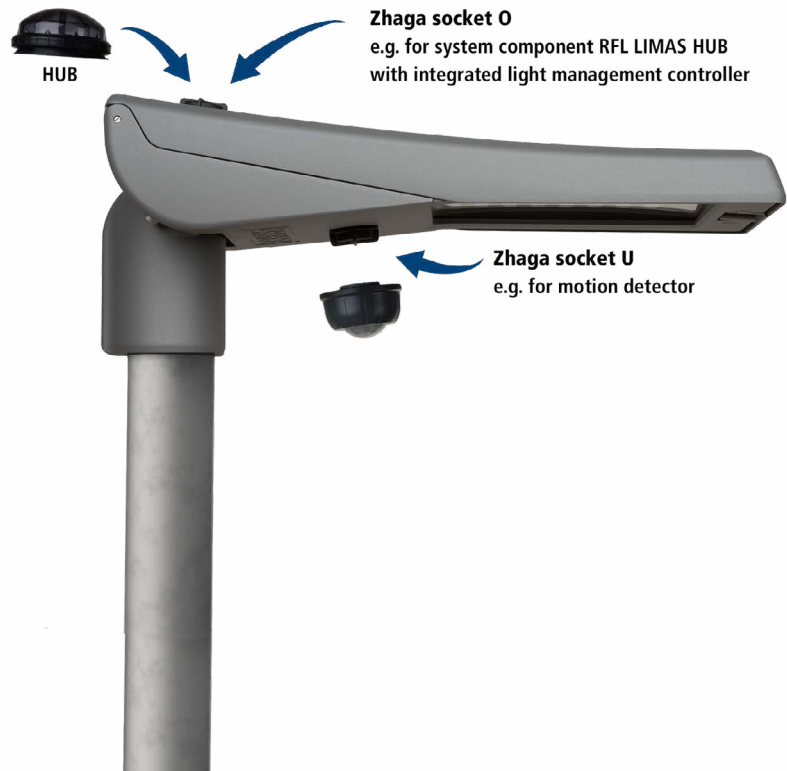
System components

Article No.	Type	
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	radio control with GPS antenna and photocell (twilight control) with integrated SIM card
90546 9014	RFL LIMAS HUB3 G2	radio control with photocell (twilight control)
90546 9011	RFL LIMAS BM RAD HUB LPH max. 8m	radio control with integrated radar motion sensors
90546 9012	RFL LIMAS BM RAD MA LPH max. 10m	radio control with integrated radar motion sensors for pole mounting
90546 9000	RFL DS20 HUB 20lux ON/OFF	twilight switch for autonomous control of RFLO luminaires
90546 9004	RFL BM/DS IR HUB LPH max. 8m	infrared motion sensor - can only be used in conjunction with RFL LIMAS HUB3 G2 and RFL LIMAS HUB3 G2 GPS SIM
90546 9006	RFL BM/DS IR HUB LPH max. 12m	infrared motion sensor / twilight switch - also for standalone operation

Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

Control components

Article No.	Type	
90545 0001	LIMAS Dongle USB	enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	control element with photocell/ twilight switch, GPS antenna and SIM card



Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Accessories / Spare Parts

Article No.	Type	
52010 9000	ABD 52	cover, pane safety glas clear, for 52...
90309 0001	RZ 76/42 VIA	adapter for mast top ø of 42mm, black
90113 0019	HA 32/L80/L100 VS	backside light shielding for 52 32..
90113 0020	HA 48/L150 VS	backside light shielding for 52 48..
90113 0021	HA 64/L210 VS	backside light shielding for 52 64..



CAMINO LED Outdoor Light Fitting Series 48...

Applications:

Residential streets, by-roads, traffic-calmed zones, parks, walkways and cycle tracks, pedestrian zones, car parks, gateways

Design:

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Upper section** with LED-Module, optics, glass cover and ECG, hinged and detachable. **Lower section** with pole mounting system, adjustment of inclination, cable retainer, cable entry with pressure compensation system.

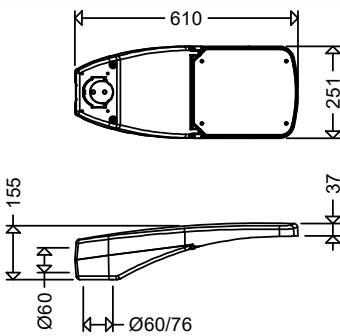
Glass cover: Flat safety glass, impact resistance IK09.

Light distribution: Asymmetrical wide beam

Connection: With isolating plug connection with cable relief.

Universal pole mounting device: Die-cast aluminium, for post top mounting Ø 60/76mm and side entry mounting Ø 60mm. For side entry mounting Ø 42mm, separate reducing accessories are required (see accessories / spare parts).

Inclination: Post top mounting 0°, 5° and 10° (factory setting 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.



Outstanding mounting advantage



Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

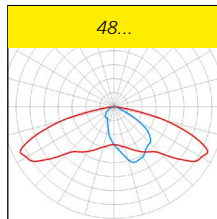
Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class I (SKI)
- asymmetrical beam (A), plane surface floodlight-optics
- optics for cycle track (RWX)
- low glare optics (ABL)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- with bird deterrence (BD)
- special painting in RAL colours (SL)



Product highlights:

- ECG with surge voltage resistance 10kV
- optimized thermal management due to direct adaption of the LED-modules to the housing
- service life $L_{90} > 100,000h$
- integrated pressure compensation system prevents condensation in the interior
- homogeneous illumination due to the Multi-Layer-Technology
- universal pole mounting system, foldable without tools, for post top or side entry mounting
- removable upper part of the housing allows a comfortable, time- and cost-saving mounting in 2 steps:
1st step: Mount bottom part on the pole and connect the mains
2nd step: Hinge upper part, connect isolating plug and shut the housing. **READY**
- adjustable inclination of the light fitting, no tools required
- upgrades or converts in regards to technical development by easy change of the upper part of the housing. After the change of the LED-modules the upper part of the housing can be used again
- eco-friendly, no light emission into the upper half-space, **ULOR=0**
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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48...



All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

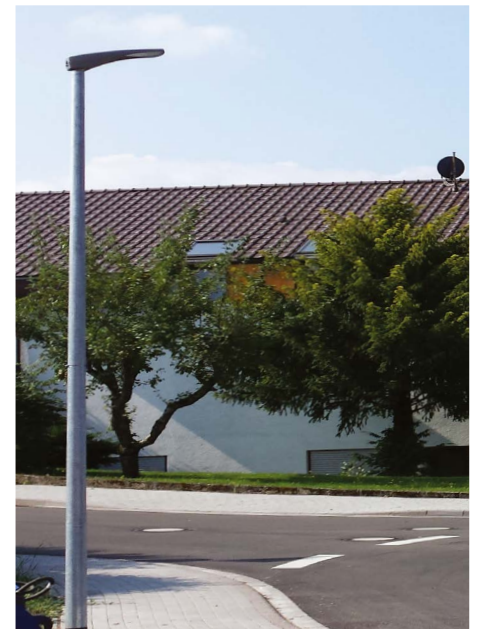
colour temperature 4.000K (light colour 740)

48001 0030	48 0801	9	1.510	168	7,0
48001 0045	48 0802	13	2.100	162	7,0
48001 0046	48 0803	18	2.840	158	7,0
48001 0005	48 1601	17	2.900	171	7,0
48001 0006	48 1602	25	4.050	162	7,0
48001 0007	48 1603	35	5.480	157	7,0
48001 0047	48 2401	26	4.470	172	7,1
48001 0048	48 2402	37	6.210	168	7,1
48001 0049	48 2403	53	8.340	157	7,4
48001 0015	48 3201	34	5.940	175	7,5
48001 0016	48 3202	50	8.280	166	7,5
48001 0017	48 3203	70	11.140	159	7,5

colour temperature 3.000K (light colour 730)

48001 0936	48 0801 730	9	1.430	159	7,0
48001 0391	48 0802 730	13	2.000	154	7,0
48001 0322	48 0803 730	18	2.700	150	7,0
48001 0099	48 1601 730	17	2.760	162	7,0
48001 0096	48 1602 730	25	3.850	154	7,0
48001 0097	48 1603 730	35	5.210	149	7,0
48001 0937	48 2401 730	26	4.250	163	7,1
48001 0143	48 2402 730	37	5.900	159	7,1
48001 0939	48 2403 730	53	7.920	149	7,4
48001 0120	48 3201 730	34	5.640	166	7,5
48001 0028	48 3202 730	50	7.870	157	7,5
48001 0018	48 3203 730	70	10.580	151	7,5

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

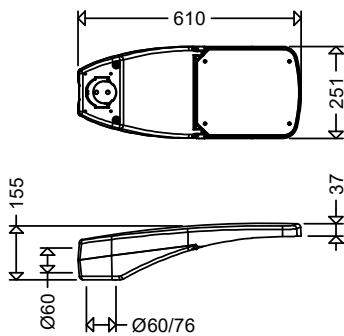


Outdoor Light Fittings

Accessories / Spare Parts

Article No.	Type	
48002 9000	ABD 48	cover, pane safety glass clear, for 48...
90306 0001	RZ 60/42 UNI	adapter for mast top ø of 42mm, black
90113 0016	HA 08/L25 VS	backside light shielding for 48 08..
90113 0017	HA 16/L50 VS	backside light shielding for 48 16..
90113 0018	HA 24/L75 VS	backside light shielding for 48 24..
90113 0019	HA 32/L80/L100 VS	backside light shielding for 48 32..

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.



Outstanding mounting advantage



Properties, limitations and details for controlling LED-light fittings:
 ■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

CAMINO LED Outdoor Light Fitting with variable setting of the luminous flux Series 48... VARIO

Applications:

Residential streets, by-roads, arterial roads, cycle tracks and sidewalk, traffic-calmed zones, car parks and factory roads etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Upper section** with LED-Module, optics, glass cover and ECG, hinged and detachable. **Lower section** with pole mounting system, adjustment of inclination, cable retainer, cable entry with pressure compensation system.

Glass cover: Flat safety glass, impact resistance IK09.

Switch for setting the luminous flux of the

luminaire.

Light distribution: Asymmetrical wide beam.

Connection: With isolating plug connection with cable relief.

Universal pole mounting device: Die-cast aluminium, for post top mounting Ø 60/76mm and side entry mounting Ø 60mm. For side entry mounting Ø 42mm, separate reducing accessories are required (see accessories / spare parts).

Inclination: Post top mounting 0°, 5° and 10° (factory setting 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– protection class I (SKI)

– asymmetrical beam (A), plane surface

floodlight-optics

– optics for cycle tracks (RWX)

– low glare optics (ABL)

– seawater resistant version (SWP)

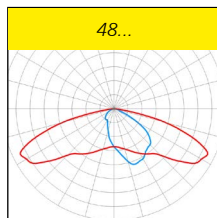
– additional overvoltage protection (OP) in SKI

– inrush current limiter (ESSB)

– with bird deterrence (BD)

– with variable setting of the luminous flux via app (VARIO NFC)

– special painting in RAL colours (SL)



Product highlights:

- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- two types replace several conventional lights and thus reduce the variety of types
- highly economical storage due to standardisation
- integrated pressure compensation system prevents condensation in the interior
- universal pole mounting system, foldable **without tools**, for post top or side entry mounting
- removable upper part of the housing allows a comfortable, time- and cost-saving mounting in 2 steps:
1st step: Mount bottom part on the pole and connect the mains
2nd step: Hinge upper part, connect isolating plug and shut the housing. **READY**
- tiltable universal pole mounting system for post top and side entry mounting, no tools required
- adjustable inclination of the light fitting, no tools required
- removable ECG upper part of the housing allows a comfortable maintenance, no painful overhead working.
- upgrades or converts by easy change of the upper-part of the housing. After the change of the LED modules the upper part of the housing can be used again.
- optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- eco-friendly, no light emission into the upper half-space, $ULOR=0$
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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48... VARIO



The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

colour temperature 4.000K (light colour 740)

48001 0703	48 L50 VARIO	9 - 35	1.330 - 5.480	172	HST 35 - 2 x HST 70	7,5
48001 0750	48 L100 VARIO	16 - 70	2.730 - 11.140	177	HST 50 - HSE 150	7,6

colour temperature 3.000K (light colour 730)

48001 0701	48 L50 VARIO 730	9 - 35	1.260 - 5.210	163	HST 35 - 2 x HST 70	7,5
48001 0761	48 L100 VARIO 730	16 - 70	2.590 - 10.580	168	HST 50 - HSE 150	7,6

Factory setting L50: 18 W; replaces approx. HME 125, HST 70 Factory setting L100: 54 W; replaces approx. HME 250

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. 1) possible setting range

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

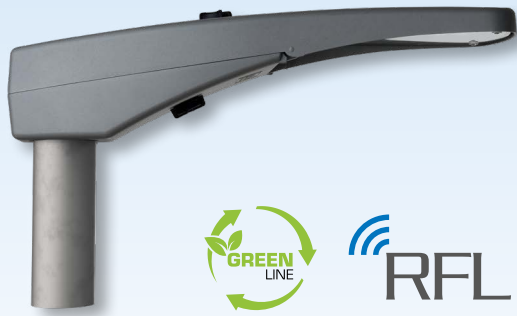
! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Accessories / Spare Parts

Article No.	Type	
48002 9000	ABD 48	cover, pane safety glass clear, for 48...
90306 0001	RZ 60/42 UNI	adapter for mast top \varnothing of 42mm, black
90113 0017	HA 16/L50 VS	backside light shielding for 48 L50
90113 0019	HA 32/L80/L100 VS	backside light shielding for 48 L100



CAMINO LED Outdoor Light Fitting Ready for Light Management System Series 48... RFL

Applications:

Residential streets, by-roads, traffic-calmed zones, parks, walkways and cycle tracks, pedestrian zones, car parks, gateways

Design:

The luminaires are prepared for the subsequent use of a light management system. An integrated socket allows retrofitting of light management components without tools.

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Upper section** with LED-Module, optics, glass cover and ECG, hinged and detachable. **Lower section** with pole mounting system, adjustment of inclination, cable retainer, cable entry with pressure compensation system.

Zhaga compliant socket on the top and/

or bottom side of the housing.

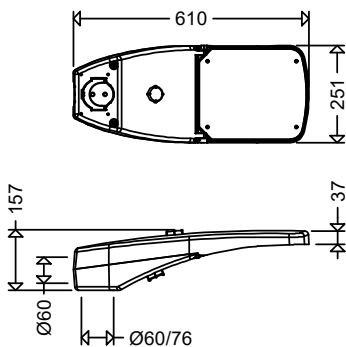
Glass cover: Flat safety glass, impact resistance IK09.

Light distribution: Asymmetrical wide beam

Connection: With isolating plug connection with cable relief.

Universal pole mounting device: Die-cast aluminium, for post top mounting Ø 60/76mm and side entry mounting Ø 60mm. For side entry mounting Ø 42mm, separate reducing accessories are required (see accessories / spare parts).

Inclination: Post top mounting 0°, 5° and 10° (factory setting 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.



Exclusively D4i control gear is being used in RFL luminaires from SCHUCH.

All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from SCHUCH. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming steps.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– adaptive Light EcoTune (ET)

– protection class I (SKI)

– asymmetrical beam (A), plane surface floodlight-optics

– optics for cycle track (RWX)

– low glare optics (ABL)

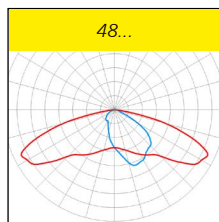
– seawater-resistant version (SWP)

– for connection to group or central battery systems (ZB) or emergency lighting networks respectively

– additional overvoltage protection (OP) in SKI

– inrush current limiter (ESSB)

– special painting in RAL colours (SL)



Outstanding mounting advantage



Product highlights:

- subsequent use of a lighting management system possible at any time
- tool-free, quick assembly of the light management system components
- standardized Zhaga compliant sockets allow free choice of light management system
- ECG with surge voltage resistance 10kV
- optimized thermal management due to direct adaption of the LED-modules to the housing
- integrated pressure compensation system prevents condensation in the interior
- homogeneous illumination due to the Multi-Layer-Technology
- universal pole mounting system, foldabel **without tools**, for post top or side entry mounting
- removable upper part of the housing allows a comfortable, time- and cost-saving mounting in 2 steps:
 - 1st step:** Mount bottom part on the pole and connect the mains
 - 2nd step:** Hinge upper part, connect isolating plug and shut the housing. **READY**
- adjustable inclination of the light fitting, no tools required
- upgrades or converts in regards to technical development by easy change of the upper part of the housing. After the change of the LED-modules the upper part of the housing can be used again.
- eco-friendly, no light emission into the upper half-space, **ULOR=0**
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and Socket
- GreenLine luminaire, outstanding sustainable design

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



Stand-alone solution
Can also be used as a stand-alone solution with motion detector.



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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48... RFLO



with a socket on the top side of the luminaire
colour temperature 4.000K (light colour 740)

48004 0001	48 0803 RFLO	18	2.840	158	7,0
48004 0002	48 1603 RFLO	35	5.480	157	7,0
48004 0003	48 2403 RFLO	53	8.340	157	7,4
48004 0004	48 3203 RFLO	70	11.140	159	7,2

colour temperature 3.000K (light colour 730)

48004 0058	48 0803 RFLO 730	18	2.700	150	7,0
48004 0059	48 1603 RFLO 730	35	5.210	149	7,0
48004 0060	48 2403 RFLO 730	53	7.920	149	7,4
48004 0061	48 3203 RFLO 730	70	10.580	151	7,2

48... RFLU



with a socket on the bottom side of the luminaire
colour temperature 4.000K (light colour 740)

48004 0005	48 0803 RFLU	18	2.840	158	7,0
48004 0006	48 1603 RFLU	35	5.480	157	7,0
48004 0007	48 2403 RFLU	53	8.340	157	7,4
48004 0008	48 3203 RFLU	70	11.140	159	7,2

colour temperature 3.000K (light colour 730)

48004 0062	48 0803 RFLU 730	18	2.700	150	7,0
48004 0063	48 1603 RFLU 730	35	5.210	149	7,0
48004 0064	48 2403 RFLU 730	53	7.920	149	7,4
48004 0065	48 3203 RFLU 730	70	10.580	151	7,2

48... RFLOU



with a socket on the top and bottom side of the luminaire
colour temperature 4.000K (light colour 740)

48004 0009	48 0803 RFLOU	18	2.840	158	7,0
48004 0010	48 1603 RFLOU	35	5.480	157	7,0
48004 0011	48 2403 RFLOU	53	8.340	157	7,4
48004 0012	48 3203 RFLOU	70	11.140	159	7,2

colour temperature 3.000K (light colour 730)

48004 0066	48 0803 RFLOU 730	18	2.700	150	7,0
48004 0047	48 1603 RFLOU 730	35	5.210	149	7,0
48004 0067	48 2403 RFLOU 730	53	7.920	149	7,4
48004 0068	48 3203 RFLOU 730	70	10.580	151	7,2

Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.



RFL LIMAS HUB3 G2 / RFL LIMAS HUB3 G2 GPS SIM



RFL LIMAS BM RAD HUB LPH max. 8m



RFL LIMAS BM RAD MA LPH max. 10m



RFL DS20 HUB 20lux ON/OFF



RFL BM/DS IR HUB LPH max. 8m



RFL BM/DS IR HUB LPH max. 12m



LIMAS USB-Dongle



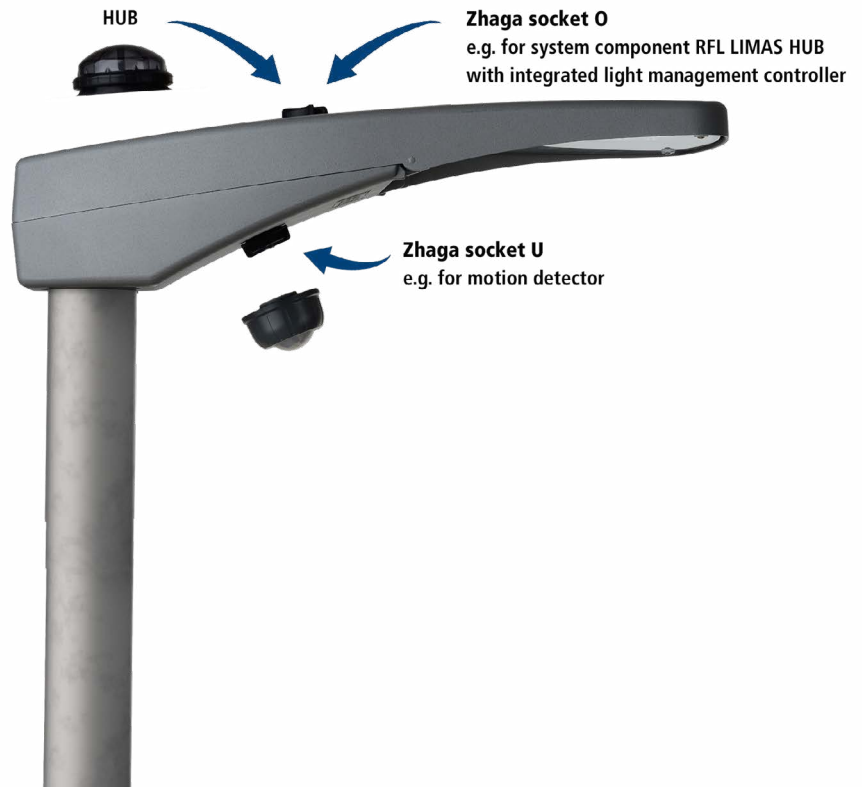
System components

Article No.	Type	
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	radio control with GPS antenna and photocell (twilight control) with integrated SIM card
90546 9014	RFL LIMAS HUB3 G2	radio control with photocell (twilight control)
90546 9011	RFL LIMAS BM RAD HUB LPH max. 8m	radio control with integrated radar motion sensors
90546 9012	RFL LIMAS BM RAD MA LPH max. 10m	radio control with integrated radar motion sensors for pole mounting
90546 9000	RFL DS20 HUB 20lux ON/OFF	twilight switch for autonomous control of RFLO luminaires
90546 9004	RFL BM/DS IR HUB LPH max. 8m	infrared motion sensor - can only be used in conjunction with RFL LIMAS HUB3 G2 and RFL LIMAS HUB3 G2 GPS SIM
90546 9006	RFL BM/DS IR HUB LPH max. 12m	infrared motion sensor / twilight switch - also for standalone operation

Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

Control components

Article No.	Type	
90545 0001	LIMAS Dongle USB	enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	control element with photocell/ twilight switch, GPS antenna and SIM card

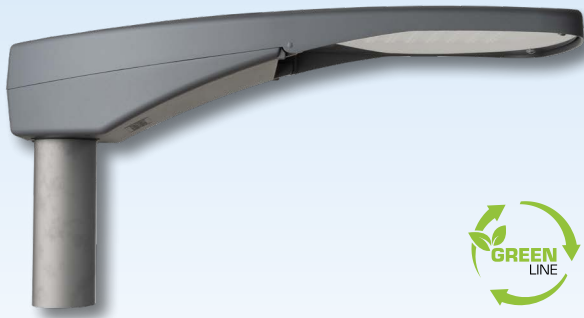


Accessories / Spare Parts

Article No.	Type	
48002 9000	ABD 48	cover, pane safety glass clear, for 48...
90306 0001	RZ 60/42 UNI	adapter for mast top Ø of 42mm, black
90113 0016	HA 08/L25 VS	backside light shielding for 48 08..
90113 0017	HA 16/L50 VS	backside light shielding for 48 16..
90113 0018	HA 24/L75 VS	backside light shielding for 48 24..
90113 0019	HA 32/L80/L100 VS	backside light shielding for 48 32..

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Subject to technical changes, misprints and errors.



CAMINO LED Outdoor Light Fitting Series 47...

Applications:

Side and main streets, roundabouts, factory streets and tracks in industrial plants, car parks, gateways etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Upper section** with LED-Module, optics, glass cover and electro kit, hinged and detachable. **Lower section** with pole mounting system, adjustment of inclination, cable retainer, cable entry with pressure compensation system. **Glass cover:** Flat safety glass, impact resistance IK09.

Light distribution: Asymmetrical wide beam

Connection: With isolating plug connection with cable relief

Universal pole mounting device: Die-cast aluminium, for post top mounting Ø 60/76mm and side entry mounting Ø 60mm. For side entry mounting Ø 42mm, separate reducing accessories are required (see accessories / spare parts).

Inclination: Post top mounting 0°, 5° and 10° (factory setting 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming steps.

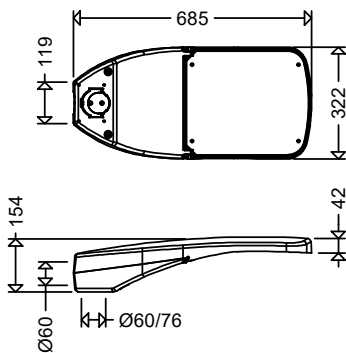
Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

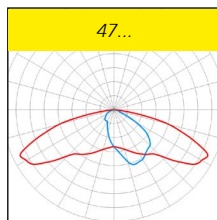
Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class I (SKI)
- asymmetrical beam (A), plane surface floodlight-optics
- low glare optics (ABL)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- for illumination of ship locks
- seawater-resistant version (SWP)
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- Light Management System (LIMAS) in protection class I (SKI)
- with bird deterrence (BD)
- special painting in RAL colours (SL)

DB standardized by Deutsche Bahn AG



Outstanding mounting advantage



Product highlights:

- ECG with surge voltage resistance 10kV
- optimized thermal management due to direct adaption of the LED-modules to the housing
- service life $L_{90} > 100,000h$
- integrated pressure compensation system prevents condensation in the interior
- homogeneous illumination due to the Multi-Layer-Technology
- universal pole mounting system, foldable without tools, for post top or side entry mounting
- removable upper part of the housing allows a comfortable, time- and cost-saving mounting in 2 steps:
1st step: Mount bottom part on the pole and connect the mains
2nd step: Hinge upper part, connect isolating plug and shut the housing. **READY**
- adjustable inclination of the light fitting, no tools required
- upgrades or converts in regards to technical development by easy change of the upper part of the housing. After the change of the LED-modules the upper part of the housing can be used again.
- eco-friendly, no light emission into the upper half-space, ULOR=0
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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47...



All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

colour temperature 4.000K (light colour 740)

47000 0003	47 3201	34	6.020	177	10,2
47000 0009	47 3202	50	8.400	168	10,2
47000 0004	47 3203	70	11.360	162	10,2
47000 0005	47 4801	52	8.980	173	10,2
47000 0010	47 4802	75	12.500	167	10,2
47000 0047	47 4803	106	16.850	159	10,2
47000 0007	47 6401	69	11.850	172	10,3
47000 0011	47 6402	99	16.440	166	10,3
47000 0048	47 6403	140	22.030	157	10,3

colour temperature 3.000K (light colour 730)

47000 0905	47 3201 730	34	5.720	168	10,2
47000 0100	47 3202 730	50	7.980	160	10,2
47000 0090	47 3203 730	70	10.790	154	10,2
47000 0383	47 4801 730	52	8.530	164	10,2
47000 0075	47 4802 730	75	11.880	158	10,2
47000 0076	47 4803 730	106	16.010	151	10,2
47000 0362	47 6401 730	69	11.260	163	10,3
47000 0270	47 6402 730	99	15.620	158	10,3
47000 0088	47 6403 730	140	20.930	150	10,3

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



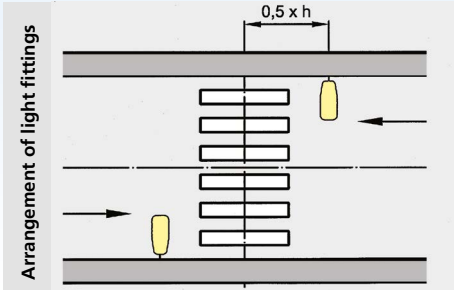
Endurance tests in Dubai confirm excellent thermal management of Series 47 ..

Test conditions:

- LED-fitting with maximum Connected load
- maximum current supply
- operation during daytime and at direct sunlight

Result:

The light fitting performed at any time correctly and reliably.

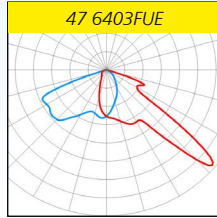


Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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47... FUE



For pedestrian crossings or for object protection



Applications:

Pedestrian crossings, object protection, fence, apron, area illumination ...

Design:

Asymmetrical light distribution. Major light beam crosswise to longitudinal axis of the luminaire with limited backward light beam.

colour temperature 4.000K (light colour 740)

47000 0448	47 6403FUE	140	22.030	157	10,3
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colour temperature 3.000K (light colour 730)

47000 0467	47 6403FUE 730	140	20.930	150	10,3
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! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

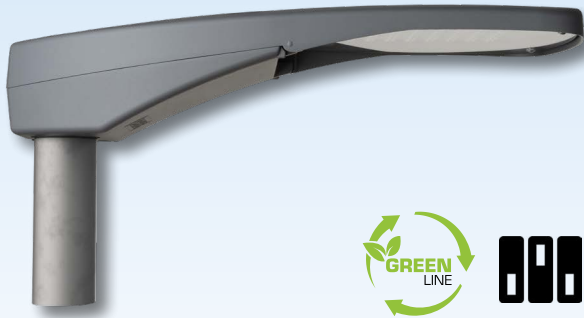


Pedestrian crossing illuminated with 1.800K (Amber)

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Accessories / Spare Parts

Article no.	Type	
47001 9002	ABD 47	cover, pane safety glass clear, for 47...
90306 0001	RZ 60/42 UNI	adapter for mast top \varnothing of 42mm, black
90113 0019	HA 32/L80/L100 VS	backside light shielding for 47 32..
90113 0020	HA 48/L150 VS	backside light shielding for 47 48..
90113 0021	HA 64/L210 VS	backside light shielding for 47 64..



CAMINO LED Outdoor Light Fitting with variable setting of the luminous flux Series 47... VARIO

Applications:

Side and main streets, roundabouts, factory streets and tracks in industrial plants, car parks, gateways etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Upper section** with LED-Module, optics, glass cover and electro kit, hinged and detachable. **Lower section** with pole mounting system, adjustment of inclination, cable retainer, cable entry with pressure compensation system.

Glass cover: Flat safety glass, impact resistance IK09.

Switch for setting the luminous flux of the

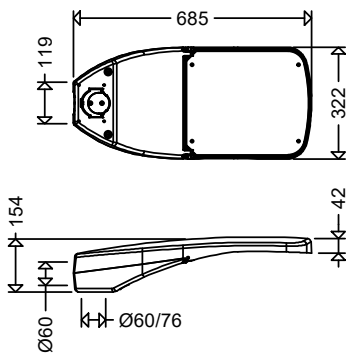
luminaire.

Light distribution: Asymmetrical wide beam.

Connection: With isolating plug connection with cable relief

Universal pole mounting device: Die-cast aluminium, for post top mounting Ø 60/76mm and side entry mounting Ø 60mm. For side entry mounting Ø 42mm, separate reducing accessories are required (see accessories / spare parts).

Inclination: Post top mounting 0°, 5° and 10° (factory setting 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.



Outstanding mounting advantage



Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722

(approx. 15% lower luminous flux)

- 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

- protection class I (SKI)

- asymmetrical beam (A), plane surface floodlight-optics

- optics for cycle tracks (RWX)

- low glare optics (ABL)

- seawater resistant version (SWP)

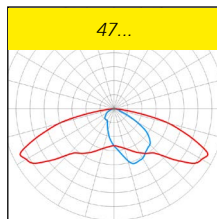
- additional overvoltage protection (OP) in SKI

- inrush current limiter (ESSB)

- with bird deterrence (BD)

- with variable setting of the luminous flux via app (VARIO NFC)

- special painting in RAL colours (SL)



Product highlights:

- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- two types replace several conventional lights and thus reduce the variety of types
- highly economical storage due to standardisation
- integrated pressure compensation system prevents condensation in the interior
- universal pole mounting system, foldable without tools, for post top or side entry mounting
- removable upper part of the housing allows a comfortable, time- and cost-saving mounting in 2 steps:
1st step: Mount bottom part on the pole and connect the mains
2nd step: Hinge upper part, connect isolating plug and shut the housing. **READY**
- tiltable universal pole mounting system for post top and side entry mounting, no tools required
- adjustable inclination of the light fitting, no tools required
- removable ECG upper part of the housing allows a comfortable maintenance, no painful overhead working.
- upgrades or converts by easy change of the upper-part of the housing. After the change of the LED modules the upper part of the housing can be used again.
- optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the **Multi-Layer-Technology** i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- eco-friendly, no light emission into the upper half-space, **ULOR=0**
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the **Dark Sky requirements**
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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47... VARIO



The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

colour temperature 4.000K (light colour 740)

47000 0366	47 L100 VARIO	16 - 70	2.760 - 11.360	180	HST 50 - HSE 150	10,2
47000 0364	47 L150 VARIO	24 - 106	4.130 - 16.850	173	2 x HME 80 - 2 x HME 250	10,2
47000 0365	47 L210 VARIO	32 - 140	5.460 - 22.030	171	2 x HST 70 - HME 400	10,3

colour temperature 3.000K (light colour 730)

47000 0468	47 L100 VARIO 730	16 - 70	2.620 - 10.790	171	HST 50 - HSE 150	10,2
47000 0469	47 L150 VARIO 730	24 - 106	3.920 - 16.010	164	2 x HME 80 - 2 x HME 250	10,2
47000 0470	47 L210 VARIO 730	32 - 140	5.190 - 20.930	162	2 x HST 70 - HME 400	10,3

Factory setting L100: 54 W; replaces approx. HME 250
 Factory setting L150: 106 W; replaces approx. 2 x HME 250

Factory setting L210: 140 W; replaces approx. HME 400

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



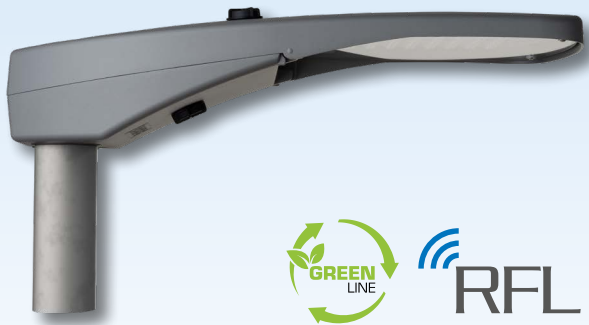
Outdoor
Light Fittings

Accessories / Spare Parts

Article no.	Type	
47001 9002	ABD 47	cover, pane safety glass clear, for 47...
90306 0001	RZ 60/42 UNI	adapter for mast top ø of 42mm, black
90113 0019	HA 32/L80/L100 VS	backside light shielding for 47 L100
90113 0020	HA 48/L150 VS	backside light shielding for 47 L150
90113 0021	HA 64/L210 VS	backside light shielding for 47 L210

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Subject to technical changes, misprints and errors.



CAMINO LED Outdoor Light Fitting Ready for Light Management System Series 47... RFL

Applications:

Side and main streets, roundabouts, factory streets and tracks in industrial plants, car parks, gateways etc.

Design:

The luminaires are prepared for the subsequent use of a light management system. An integrated socket allows retrofitting of light management components without tools.

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Upper section** with LED-Module, optics, glass cover and electro kit, hinged and detachable. **Lower section** with pole mounting system, adjustment of inclination, cable retainer, cable entry with pressure compensation system.

Zhaga compliant socket on the top and/

or bottom side of the housing.

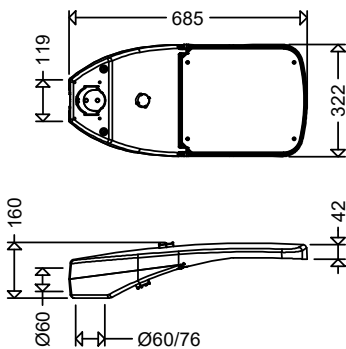
Glass cover: Flat safety glass, impact resistance IK09.

Light distribution: Asymmetrical wide beam

Connection: With isolating plug connection with cable relief

Universal pole mounting device: Die-cast aluminium, for post top mounting Ø 60/76mm and side entry mounting Ø 42mm. For side entry mounting separate reducing accessories are required (see accessories / spare parts).

Inclination: Post top mounting 0°, 5° and 10° (factory setting 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.



Exclusively D4i control gear is being used in RFL luminaires from SCHUCH.

All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from SCHUCH. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

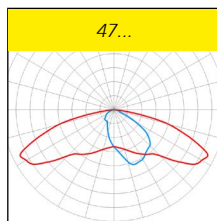
On request, the luminaires are also available with the following configurations:

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class I (SKI)
- asymmetrical beam (A), plane surface floodlight-optics
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- seawater-resistant version (SWP)
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- special painting in RAL colours (SL)



Outstanding mounting advantage



Product highlights:

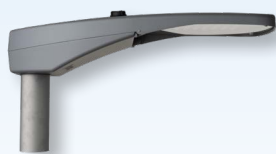
- subsequent use of a lighting management system possible at any time
- tool-free, quick assembly of the light management system components
- standardized Zhaga compliant sockets allow free choice of light management system
- ECG with surge voltage resistance 10kV
- optimized thermal management due to direct adaption of the LED-modules to the housing
- integrated pressure compensation system prevents condensation in the interior
- homogeneous illumination due to the Multi-Layer-Technology
- universal pole mounting system, foldable **without tools**, for post top or side entry mounting
- removable upper part of the housing allows a comfortable, time- and cost-saving mounting in 2 steps:
1st step: Mount bottom part on the pole and connect the mains
2nd step: Hinge upper part, connect isolating plug and shut the housing. **READY**
- adjustable inclination of the light fitting, no tools required
- upgrades or converts in regards to technical development by easy change of the upper part of the housing. After the change of the LED-modules the upper part of the housing can be used again.
- eco-friendly, no light emission into the upper half-space, **ULOR=0**
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and Socket
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



Stand-alone solution
Can also be used as a stand-alone solution with motion detector.



Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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47... RFLO



with a socket on the top side of the luminaire
colour temperature 4.000K (light colour 740)

47002 0001	47 3203 RFLO	70	11.360	162	10,2
47002 0002	47 4803 RFLO	106	16.850	159	10,2
47002 0003	47 6403 RFLO	140	22.030	157	10,3

colour temperature 3.000K (light colour 730)

47002 0036	47 3203 RFLO 730	70	10.790	171	10,2
47002 0037	47 4803 RFLO 730	106	16.010	164	10,2
47002 0038	47 6403 RFLO 730	140	20.930	159	10,3

47... RFLU



with a socket on the bottom side of the luminaire
colour temperature 4.000K (light colour 740)

47002 0004	47 3203 RFLU	70	11.360	162	10,2
47002 0005	47 4803 RFLU	106	16.850	159	10,2
47002 0006	47 6403 RFLU	140	22.030	157	10,3

colour temperature 3.000K (light colour 730)

47002 0039	47 3203 RFLU 730	70	10.790	154	10,2
47002 0040	47 4803 RFLU 730	106	16.010	151	10,2
47002 0041	47 6403 RFLU 730	140	20.930	150	10,3

47... RFLOU



with a socket on the top and bottom side of the luminaire
colour temperature 4.000K (light colour 740)

47002 0007	47 3203 RFLOU	70	11.360	162	10,2
47002 0008	47 4803 RFLOU	106	16.850	159	10,2
47002 0009	47 6403 RFLOU	140	22.030	157	10,3

colour temperature 3.000K (light colour 730)

47002 0042	47 3203 RFLOU 730	70	10.790	154	10,2
47002 0043	47 4803 RFLOU 730	106	16.010	151	10,2
47002 0044	47 6403 RFLOU 730	140	20.930	150	10,3

! Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.



Outdoor
Light Fittings

RFL LIMAS HUB3 G2 / RFL LIMAS HUB3 G2 GPS SIM



RFL LIMAS BM RAD HUB LPH max. 8m



RFL LIMAS BM RAD MA LPH max. 10m



RFL DS20 HUB 20lux ON/OFF



RFL BM/DS IR HUB LPH max. 8m



RFL BM/DS IR HUB LPH max. 12m



LIMAS USB-Dongle



System components

Article No.	Type	
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	radio control with GPS antenna and photocell (twilight control) with integrated SIM card
90546 9014	RFL LIMAS HUB3 G2	radio control with photocell (twilight control)
90546 9011	RFL LIMAS BM RAD HUB LPH max. 8m	radio control with integrated radar motion sensors
90546 9012	RFL LIMAS BM RAD MA LPH max. 10m	radio control with integrated radar motion sensors for pole mounting
90546 9000	RFL DS20 HUB 20lux ON/OFF	twilight switch for autonomous control of RFLO luminaires
90546 9004	RFL BM/DS IR HUB LPH max. 8m	infrared motion sensor - can only be used in conjunction with RFL LIMAS HUB3 G2 and RFL LIMAS HUB3 G2 GPS SIM
90546 9006	RFL BM/DS IR HUB LPH max. 12m	infrared motion sensor / twilight switch - also for standalone operation

Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

Control components

Article No.	Type	
90545 0001	LIMAS Dongle USB	enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	control element with photocell/ twilight switch, GPS antenna and SIM card

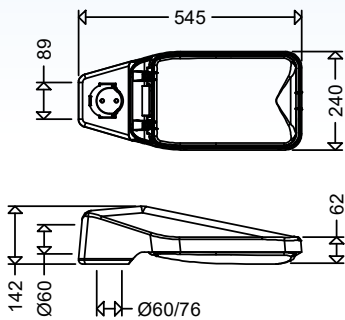


Accessories / Spare Parts

Article no.	Type	
47001 9002	ABD 47	cover, pane safety glass clear, for 47...
90306 0001	RZ 60/42 UNI	adapter for mast top ø of 42mm, black
90113 0019	HA 32/L80/L100 VS	backside light shielding for 47 32..
90113 0020	HA 48/L150 VS	backside light shielding for 47 48..
90113 0021	HA 64/L210 VS	backside light shielding for 47 64..

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Subject to technical changes, misprints and errors.



FILOS LED Outdoor Light Fitting with variable setting of the luminous flux Series 42AL... VARIO

Applications:

Residential-, side roads und through traffic streets, footpaths and cycle tracks, traffic-calmed areas, factory streets in industrial plants, car parks, gateways etc..

Design :

Housing: Die-cast aluminium, DB 702.

Diffuser: UV-stabilized PC, clear, hingeable and detachable.

Gear tray: Aluminium, with LED modul, optics and all electrical components in compact unit protected against accidental contact, isolating plug connection and cable retainer.

Switch for setting the luminous flux of the

luminaire.

Central closing: Stainless steel.

Light distribution: Asymmetrical wide beam.

Universal pole mounting device: Die-cast aluminium, for post top mounting Ø 60/76mm and side entry mounting Ø 60mm. For side entry mounting Ø 42mm, separate reducing accessories are required (see accessories / spare parts).

Inclination: Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722

(approx. 15% lower luminous flux)

- 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux

- protection class I (SKI)

- asymmetrical beam (A), plane surface floodlight-optics

- optics for cycle track (RWX)

- seawater resistant version (SWP)

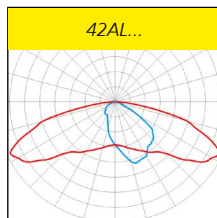
- additional overvoltage protection (OP) in SKI

- inrush current limiter (ESSB)

- Ready for Light Management Systems (RFL)

- with variable setting of the luminous flux via app (VARIO NFC)

- special painting in RAL colours (SL)



Product highlights:

- one types replace several conventional lights and thus reduce the variety of types
- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- highly economical storage due to standardisation
- ECG with high over-voltage protection reliable due to overload and short circuit protection
- integrated pressure compensation system prevents condensation in the interior
- protection of the LEDs against mechanical and electrostatic discharge due to sandwich-design of gear tray and cover
- homogeneous illumination due to the Multi-Layer technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping. No dark zones in the road if any single LED would fail and the uniformity of the illumination is kept.
- Quick an easy mounting due to
 - tool-free opening of the luminaire by means of a central toggle clamp made of stainless steel
 - gear tray hingeable and detachable
 - removable multi-function cable entry enables pre-assembly of the connection cable
 - integrated universal pole mounting system (side entry mounting Ø 60mm or post top mounting Ø 60/76mm)
- quick changeover due to easily replacable gear-tray with disconnecter
- eco-friendly, ULOR=0%
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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42AL... VARIO

IP66  Wind load area A = 0,06m²

The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

colour temperature 4.000K (light colour 740)

42003 0001	42AL L50 VARIO	9 - 35	1.400 - 5.670	181	HST 35 - 2 x HST 70	4,9
42003 0026	42AL L80 VARIO	16 - 50	2.840 - 8.370	185	HST 50 - HME 250	4,9

colour temperature 3.000K (light colour 730)

42003 0008	42AL L50 VARIO 730	9 - 35	1.330 - 5.390	172	HST 35 - 2 x HST 70	4,9
42003 0020	42AL L80 VARIO 730	16 - 50	2.700 - 7.950	176	HST 50 - HME 250	4,9

Factory setting L50: 18 W; replaces approx. ca. HME 125, HST 70 Factory setting L80: 50 W; replaces approx. HME 250

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. 1) possible setting range

! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Accessories / Spare Parts

Article no.	Type	
42001 9003	ABD 42 PC	cover, diffuser PC clear, UV stabilized, clear, for 42...
90306 0001	RZ 60/42 UNI	adapter for mast top \varnothing of 42mm
90113 0017	HA 16/L50 VS	backside light shielding for 42AL L50
90113 0019	HA 32/L80/L100 VS	backside light shielding for 42AL L80

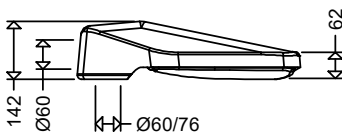
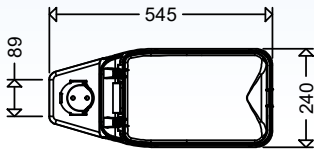
Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

NEW

FILOS LED Outdoor Light Fitting with variable setting of the luminous flux Series 42... VARIO



Polyester housing

**Applications:**

Residential-, through traffic streets, footpaths and cycle tracks, traffic-calmed areas, factory streets, car parks, gateways etc.

Design :

Housing: Glass fibre reinforced polyester resin, unpainted, or painting DB 702 (mica-iron).

Diffuser: UV-stabilized PC, clear, hingeable and detachable.

Gear tray: Aluminium, with LED modul, optics and all electrical components in compact unit protected against accidental contact, isolating plug connection and cable retainer.

Switch for setting the luminous flux of the luminaire.

Central closing: Stainless steel.

Light distribution: Asymmetrical wide beam.

Universal pole mounting device: Die-cast aluminium, for post top mounting Ø 60/76mm and side entry mounting Ø 60mm. For side entry mounting Ø 42mm, separate reducing accessories are required (see accessories / spare parts).

Inclination: Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722

(15% lower luminous flux)

- 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

- protection class I (SKI)

- asymmetrical beam (A), plane surface floodlight-optics

- optics for cycle track (RWX)

- seawater resistant version (SWP)

- UV-protected and weather-resistant

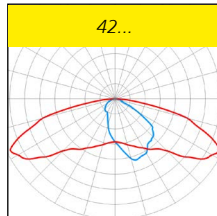
housing painted RAL 7035

- additional overvoltage protection (OP) in SKI

- inrush current limiter (ESSB)

- Ready for Light Management Systems (RFL)

- with variable setting of the luminous flux via app (VARIO NFC)

**Product highlights:**

- one type replace several conventional lights and thus reduce the variety of types
- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- highly economical storage due to standardisation
- ECG with high over-voltage protection reliable due to overload and short circuit protection
- protection of the LEDs against mechanical and electrostatic discharge due to sandwich-design of gear tray and cover
- homogeneous illumination due to the Multi-Layer technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping. No dark zones in the road if any single LED would fail and the uniformity of the illumination is kept.
- Quick an easy mounting due to
 - tool-free opening of the luminaire by means of a central toggle clamp made of stainless steel
 - gear tray hingeable and detachable
 - removable multi-function cable entry enables pre-assembly of the connection cable
 - integrated universal pole mounting system (side entry mounting Ø 60mm or post top mounting Ø 60/76mm)
- quick changeover due to easily replaceable gear-tray with disconnecter
- eco-friendly, ULOR=0%
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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42... VARIO



The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

colour temperature 4.000K (light colour 740)

42008 0001	42 L50 VARIO	9 - 35	1.400 - 5.670	181	HST 35 - 2 x HST 70	4,0
42008 0003	42 L80 VARIO	16 - 50	2.840 - 8.370	185	HST 50 - HME 250	4,1
42008 0501	42 L50 VARIO DB702	9 - 35	1.400 - 5.670	181	HST 35 - 2 x HST 70	4,0
42008 0503	42 L80 VARIO DB702	16 - 50	2.840 - 8.370	185	HST 50 - HME 250	4,1

colour temperature 3.000K (light colour 730)

42008 0002	42 L50 VARIO 730	9 - 35	1.330 - 5.390	172	HST 35 - 2 x HST 70	4,0
42008 0004	42 L80 VARIO 730	16 - 50	2.700 - 7.950	176	HST 50 - HME 250	4,1
42008 0502	42 L50 VARIO 730 DB702	9 - 35	1.330 - 5.390	172	HST 35 - 2 x HST 70	4,0
42008 0504	42 L80 VARIO 730 DB702	16 - 50	2.700 - 7.950	176	HST 50 - HME 250	4,1

Factory setting L50: 18 W; replaces approx. ca. HME 125, HST 70

Factory setting L80: 50 W; replaces approx. HME 250

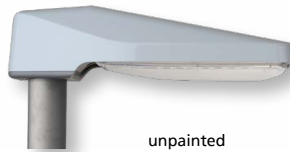
* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



unpainted



painting DB 702 (mica-iron)



4871 RAL 7035



4871 DB702

Welded Aluminium Standard Pole Arm Carrier Series 4871

Applications:

For mounting outdoor light fittings on flat walls and corners of buildings.

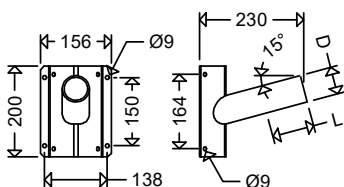
Design:

Aluminium plate 4 mm thick, powder coated grey (RAL

7035) or mica-iron (DB702), with eight fixing holes \varnothing 9mm and pole arm \varnothing 60mm (100mm long).

Options:

Special painting in RAL colours (SL)



4871

Article no.	Type	D	L	Weight ca. [kg]
48700 0002	4871 RAL 7035	60	100	0,7
48700 0506	4871 DB702	60	100	0,7

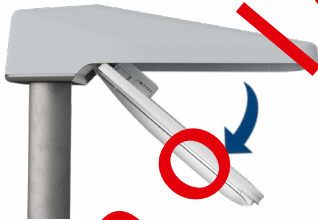
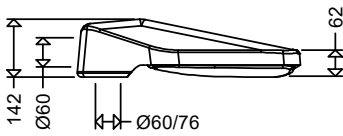
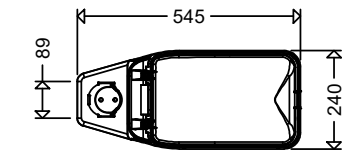
Accessories / Spare Parts

Article no.	Type	
42001 9003	ABD 42 PC	cover, diffuser PC clear, UV stabilized, clear, for 42...
90306 0001	RZ 60/42 UNI	adapter for mast top of \varnothing 42mm
90113 0017	HA 16/L50 VS	backside light shielding for 42 L50
90113 0019	HA 32/L80/L100 VS	backside light shielding for 42 L80

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.



Polyester housing



FILOS LED Outdoor Light Fitting with variable setting of the luminous flux Series 42... VARIO M

Applications:

Residential-, through traffic streets, footpaths and cycle tracks, traffic-calmed areas, factory streets, car parks, gateways etc.

Design :

Housing: Glass fibre reinforced polyester resin, unpainted, or painting DB 703 (mica-iron).

Diffuser: UV-stabilized PC, clear, hingeable and detachable.

Gear tray: Aluminium, with LED modul, optics and all electrical components in compact unit protected against accidental contact, isolating plug connection and cable retainer.

Switch: For setting luminous flux of the luminaire.

Central closing: Stainless steel.

Light distribution: Asymmetrical wide beam.

Universal pole mounting device: Die-cast

aluminium, for post top mounting Ø 60/76mm and side entry mounting Ø 60mm.

For side entry mounting Ø 42mm, separate reducing accessories are required (see accessories / spare parts).

Inclination: Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

Electrical data:

LED module: Midpower-LED, 4,000K or 3,000K, $R_a > 80$, service life $L_{80} > 100,000h$, RoHS compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 822
(17% lower luminous flux)

- protection class II (SKII)

- asymmetrical beam (A), plane surface floodlight-optics

- optics for cycle track (RWX)

- seawater resistant version (SWP)

- UV-protected and weather-resistant

- housing painted RAL 7035

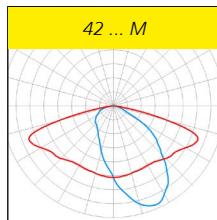
- additional overvoltage protection (OP)

- inrush current limiter (ESSB)

- Ready for Light Management Systems (RFL)

- with variable setting of the luminous flux via app (VARIO NFC)

- Die-cast aluminium housing



Product highlights:

- one type replace several conventional lights and thus reduce the variety of types
- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- highly economical storage due to standardisation
- ECG with high over-voltage protection reliable due to overload and short circuit protection
- protection of the LEDs against mechanical and electrostatic discharge due to sandwich-design of gear tray and cover
- homogeneous illumination due to the Multi-Layer technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping. No dark zones in the road if any single LED would fail and the uniformity of the illumination is kept.
- Quick an easy mounting due to
 - tool-free opening of the luminaire by means of a central toggle clamp made of stainless steel
 - gear tray hingeable and detachable
 - removable multi-function cable entry enables pre-assembly of the connection cable
 - integrated universal pole mounting system (side entry mounting Ø 42/60mm or post top mounting Ø 60/76mm), no additional flanges or adapter pieces required
- quick changeover due to easily replaceable gear-tray with disconnecter
- eco-friendly, no direct light emission into the upper half space, ULOR=0%
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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42... VARIO M

The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

colour temperature 4.000K (light colour 840)

42002 0001	42 L50 VARIO M	9 - 5	1.210 - 5.350	167	HST 35 - 2 x HST 70	4,0
42002 0027	42 L80 VARIO M	16 - 50	2.530 - 7.970	173	HST 50 - HME 250	4,1
42002 0501	42 L50 VARIO M DB703	9 - 35	1.210 - 5.350	167	HST 35 - 2 x HST 70	4,0
42002 0030	42 L80 VARIO M DB703	16 - 50	2.530 - 7.970	173	HST 50 - HME 250	4,1

colour temperature 3.000K (light colour 830)

42002 0007	42 L50 VARIO M 830	9 - 35	1.180 - 5.190	162	HST 35 - 2 x HST 70	4,0
42002 0028	42 L80 VARIO M 830	16 - 50	2.450 - 7.730	168	HST 50 - HME 250	4,1
42002 0512	42 L50 VARIO M 830 DB703	9 - 35	1.180 - 5.190	162	HST 35 - 2 x HST 70	4,0
42002 0516	42 L80 VARIO M 830 DB703	16 - 50	2.450 - 7.730	168	HST 50 - HME 250	4,1

Factory setting L50: 18 W; replaces approx. conventional HME 125, HST 70 Factory setting L80: 50 W; replaces approx. HME 250

1) possible setting range

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

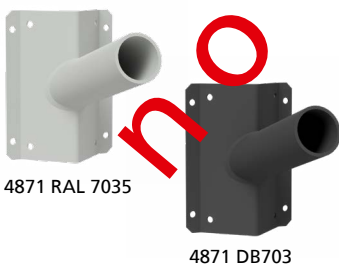
! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



unpainted

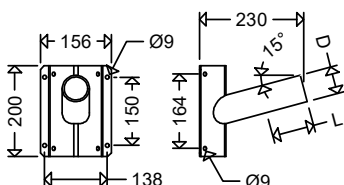


painting DB703 (mica-iron)



4871 RAL 7035

4871 DB703



Welded Aluminium Standard Pole Arm Carrier Series 4871

Applications:

For mounting outdoor light fittings on flat walls and corners of buildings.

Design:

Aluminium plate 4 mm thick, powder coated grey (RAL

7035) or mica-iron (DB703), with eight fixing holes \varnothing 9mm and pole arm \varnothing 42mm (100mm long) or \varnothing 60mm (100mm long).

Options:

Special painting in RAL colours (SL)

4871

Article no.	Type	D	L	Weight ca. [kg]
48700 0002	4871 RAL 7035	60	100	0,7
48700 0504	4871 DB703	60	100	0,7

Accessories / Spare Parts

Article no.	Type	
42001 9003	ABD 42 PC	cover, diffuser PC clear, UV stabilized, clear, for 42...
90306 0001	RZ 60/42 UNI	adapter for mast top of \varnothing 42mm

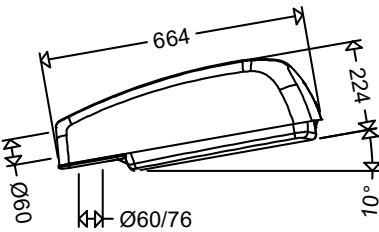
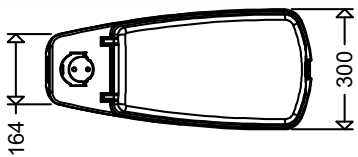
Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

NEW

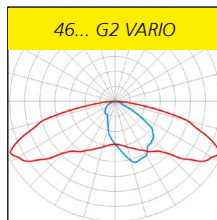
LUCA Modern LED Outdoor Light Fitting with variable setting of the luminous flux and Multi-Purpose Mounting System Series 46... G2 VARIO



with UV resistant coating



Compact unit with all electrical components,
detachable without tools.

**Applications:**

Residential streets, by-roads and thoroughfares, walkways and bicycle lanes, traffic-calmed zones, factory streets in industrial plants, car parks, entrances and exits etc.

Design:

Housing: Glass fibre reinforced polyester resin with UV resistant coating, integrated pressure compensation system.

Diffuser: UV stabilized PC, clear, hinged and detachable.

Gear tray: Aluminium, with LED module, optics and all electrical components as a compact unit. Unit connected to the clear cover in a (sandwich construction), disconnectable plug-in connection and

strain relief.

Switch for setting the luminous flux of the luminaire.

Fasteners: Stainless steel.

Light distribution: Asymmetrical wide beam

Universal pole mounting device: Die-cast aluminium, for post top mounting

Ø 60/76mm (inclination: 10°) and side entry mounting Ø 60mm. For side entry mounting Ø 42mm, separate reducing accessories are required (see accessories / spare parts).

Inclination: Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life L_{90} 100,000h, Zhaga compliant
ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722
(approx. 15% lower luminous flux)

- 1,800K, light colour 518 „Amber“
(approx. 45% lower luminous flux)

- protection class I (SKI)

- asymmetrical beam (A), plane surface floodlight-optics

- low glare optics (ABL)

- optics for cycle track (RWX)

- for connection to group or central battery systems (ZB) or emergency lighting networks respectively

- additional overvoltage protection (OP) in SKI

- inrush current limiter (ESSB)

- Ready for Light Management Systems (RFL)

- with increased luminous flux up to 15,000lm

- seawater-resistant version (SWP)

- special painting in RAL colours (SL)

- with variable setting of the luminous flux via app (VARIO NFC)

- aluminium housing (AL)

Product highlights:

- one type replace several conventional lights and thus reduce the variety of types
- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- protection of the LEDs against mechanical and electrostatic discharge due to sandwich-design of gear tray and cover
- high quality housing made glass fibre reinforced from polyester with UV-protected and weather-resistant coating
- integrated pressure compensation system prevents condensation in the interior
- removable multi-function cable entry enables pre-assembly of the connection cable outside the luminaire
- tool free turnable pole mounting system for quick post top or side entry mounting
- one hinged and detachable compact unit, consisting of glass, gear tray and LED, to be opened without tool, thus allowing a comfortable maintenance and a quick change of components or upgrade in case of technical development of LED
- optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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IP65  Wind load area A = 0,11

46... G2 VARIO

The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

colour temperature 4.000K (light colour 740)

46007 0001	46 L50 VARIO	9 - 35	1.420 - 5.840	184	HST 35 - 2 x HST 70	5,9
46007 0002	46 L100 VARIO	16 - 70	2.910 - 11.720	188	HST 50 - HSE 150	6,0

colour temperature 3.000K (light colour 730)

46007 0003	46 L50 VARIO 730	9 - 35	1.350 - 5.550	174	HST 35 - 2 x HST 70	5,9
46007 0004	46 L100 VARIO 730	16 - 70	2.760 - 11.130	178	HST 50 - HSE 150	6,0

Factory setting L50: 18 W; replaces approx. HME 125, HST 70 Factory setting L100: 54 W; replaces approx. HME 250

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. 1) possible setting range



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Accessories / Spare Parts

Article no.	Type	
46001 9003	ABD 46 G2 PC K	cover, diffuser PC clear, UV stabilized, for 46...
90306 0003	RZ 60/42 BR46	adapter for mast top ø of 42mm, black
90113 0017	HA 16/L50 AB VS	backside light shielding for 46 L50
90113 0019	HA 32/L80/L100 AB VS	visor to avoid backwards radiation flux for 46 L100

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.



PENDO Rope Supported LED Light Fitting Series 59 ...

Applications:

Residential and service roads, by-roads and main roads etc.

Design:

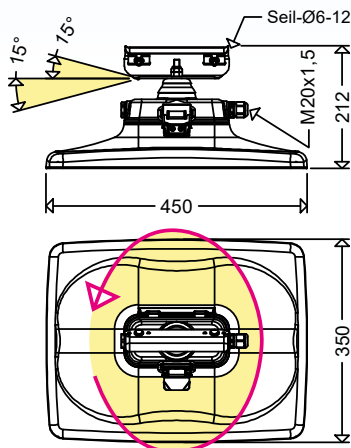
Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Lower section** with LED-Module, optics, glass cover and ECG, tool-free hingeable and detachable. **Upper section** with bracket, adjustment of inclination, cable entry with pressure compensation system.

Glass cover: Flat safety glass, impact resistance IK10.

Light distribution: Symmetrical wide beam.

Connecting terminal: With plug-in connection in junction box between upper and lower section, tool-free separation of upper and lower section.

Mounting: Stainless steel. Turnable (all directions) and adjustable by 15°, mountable on ropes of 6 - 12mm diameter.



Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming steps.

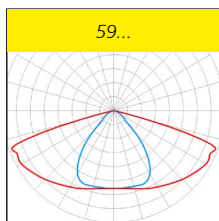
Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

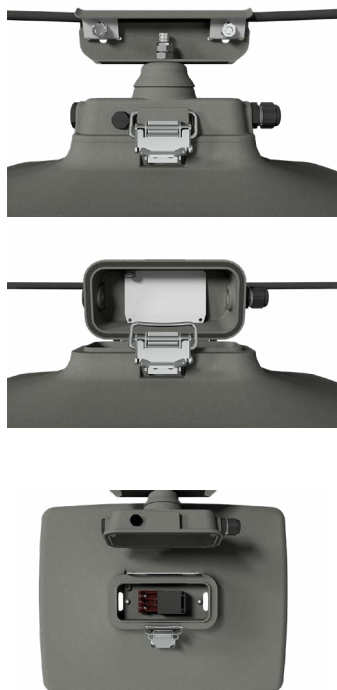
Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- seawater-resistant version (SWP)

- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- 3-point supporting bracket (3P)
- special painting in RAL colours (SL)



Outstanding mounting advantage



Product highlights:

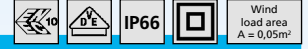
- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant die-cast aluminium housing with plain surface. Deposit of greenery and dirt is not possible
- integrated pressure compensation system prevents condensation in the interior
- time- and cost-saving mounting in 2 steps due to tool-free removable lower part of the housing:
1st step: Hinge upper part with bracket onto the rope and connect the mains
2nd step: Hinge lower part, connect isolating plug, shut the housing and close. **READY**
- universal usage on cross- and longitudinal ropes, inclined ropes or 3-point rope supports (see accessories) due to all-side rotatable and up to 15° inclinable stainless steel bracket
- tool-free disconnection (also electrical!) of the lower part from the upper part allows a comfortable replacement of the components at site or in the workshop, extensive dismantling of the fitting or uncomfortable "over-head working" is not necessary
- efficient and optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the Multi-Layer technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping. No dark zones in the road if any single LED would fail and the uniformity of the illumination is kept.
- eco-friendly, no light emission into the upper half-space, **ULOR=0**
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the **Dark Sky requirements**
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

! Properties, limitations and details for controlling LED-light fittings:
■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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59...



All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

colour temperature 4.000K (light colour 740)

59001 0069	59 1601	17	3.210	189	6,6
59001 0070	59 1602	25	4.480	179	6,6
59001 0071	59 1603	35	6.070	173	6,6
59001 0072	59 3201	34	6.420	189	7,0
59001 0036	59 3202	50	8.950	179	7,0
59001 0051	59 3203	70	12.080	173	7,0

colour temperature 3.000K (light colour 730)

59001 0063	59 1601 730	17	3.050	179	6,6
59001 0066	59 1602 730	25	4.260	170	6,6
59001 0073	59 1603 730	35	5.770	165	6,6
59001 0074	59 3201 730	34	6.100	179	7,0
59001 0075	59 3202 730	50	8.500	170	7,0
59001 0076	59 3203 730	70	11.480	164	7,0

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Optionally also with 3-point mounting (3P)



Accessories / Spare Parts

Article no.	Type	
49001 9003	ABD 59	cover, pane safety glass clear, for 59...

NEW

PENDO Rope Supported LED Light Fitting with variable setting of the luminous flux Series 59 ... VARIO



Applications:

Residential and service roads, by-roads and main roads etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Lower section** with LED-Module, optics, glass cover and ECG, tool-free hingeable and detachable. **Upper section** with bracket, adjustment of inclination, cable entry with pressure compensation system.

Glass cover: Flat safety glass, impact

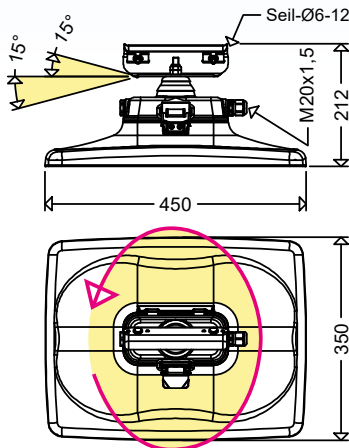
resistance IK10.

Light distribution: Symmetrical wide beam.

Switch for setting the luminous flux of the luminaire.

Connecting terminal: With plug-in connection in junction box between upper and lower section, tool-free separation of upper and lower section.

Mounting: Stainless steel. Turnable (all directions) and adjustable by 15°, mountable on ropes of 6 - 12mm diameter.



Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

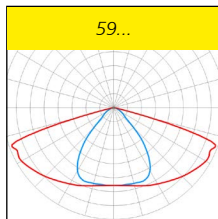
Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

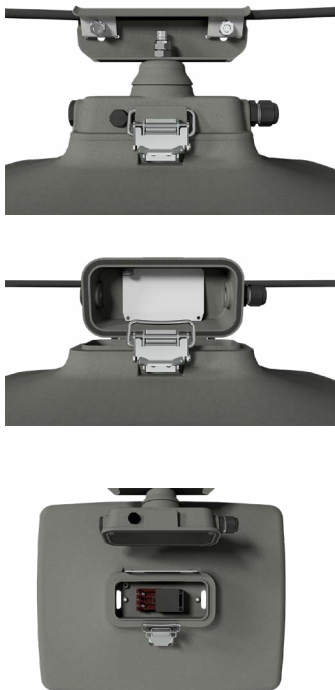
Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722 in SKI
- (approx. 15% lower luminous flux) - inrush current limiter (ESSB)
- 1,800K, light colour 518 „Amber“ - 3-point supporting bracket (3P)
- (approx. 45% lower luminous flux) - with variable setting of the luminous flux via app (VARIO NFC)
- protection class I (SKI) - special painting in RAL colours (SL)
- seawater-resistant version (SWP)
- additional overvoltage protection (OP)



Outstanding mounting advantage



Product highlights:

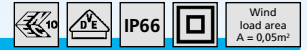
- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant die-cast aluminium housing with plain surface. Deposit of greenery and dirt is not possible
- integrated pressure compensation system prevents condensation in the interior
- time- and cost-saving mounting in 2 steps due to tool-free removable lower part of the housing:
1st step: Hinge upper part with bracket onto the rope and connect the mains
2nd step: Hinge lower part, connect isolating plug, shut the housing and close. **READY**
- universal usage on cross- and longitudinal ropes, inclined ropes or 3-point rope supports (see accessories) due to all-side rotatable and up to 15° inclinable stainless steel bracket
- tool-free disconnection (also electrical!) of the lower part from the upper part allows a comfortable replacement of the components at site or in the workshop, extensive dismantling of the fitting or uncomfortable "over-head working" is not necessary
- efficient and optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the Multi-Layer technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping. No dark zones in the road if any single LED would fail and the uniformity of the illumination is kept.
- eco-friendly, no light emission into the upper half-space, $ULOR=0$
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:
See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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59... VARIO



The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

colour temperature 4.000K (light colour 740)

59005 0005	59 L50 VARIO	9 - 35	1.470 - 6.070	190	HST 35 - 2 x HST 70	6,6
59005 0006	59 L100 VARIO	16 - 70	2.950 - 12.080	191	HST 50 - HSE 150	7,0

colour temperature 3.000K (light colour 730)

59005 0007	59 L50 VARIO 730	9 - 35	1.400 - 5.770	181	HST 35 - 2 x HST 70	6,6
59005 0008	59 L100 VARIO 730	16 - 70	2.800 - 11.480	182	HST 50 - HSE 150	7,0

Factory setting L50: 18 W; replaces approx. HME 125, HST 70

Factory setting L100: 50 W; replaces approx. HME 250

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Optionally also with 3-point mounting (3P)



Accessories / Spare Parts

Article no.	Type	
49001 9003	ABD 59	cover, pane safety glass clear, for 59...



PENDO Rope Supported LED Light Fitting Ready for Light Management System Series 59 ... RFL

Applications:

Residential and service roads, by-roads and main roads etc.

Design:

The luminaires are prepared for the subsequent use of a light management system. An integrated socket allows retrofitting of light management components without tools.

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Lower section** with LED-Module, optics, glass cover and ECG, tool-free hingeable and detachable. **Upper section** with bracket, adjustment of inclination, cable entry with pressure

compensation system.

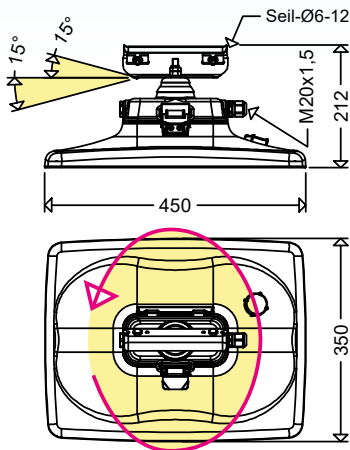
Zhaga compliant socket on the top side of the housing.

Glass cover: Flat safety glass, impact resistance IK10.

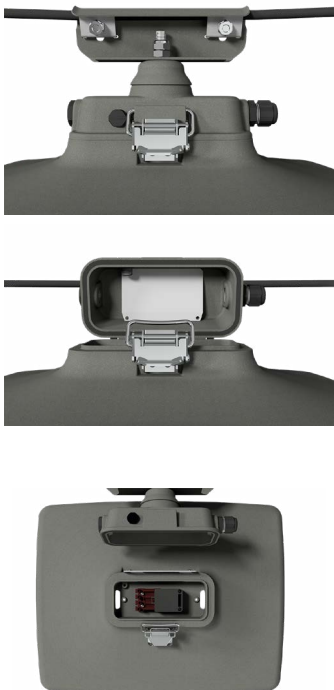
Light distribution: Symmetrical wide beam.

Connecting terminal: With plug-in connection in junction box between upper and lower section, tool-free separation of upper and lower section.

Mounting: Stainless steel. Turnable (all directions) and adjustable by 15°, mountable on ropes of 6 - 12mm diameter.



Outstanding mounting advantage



Exclusively D4i control gear is being used in RFL luminaires from SCHUCH.

All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from SCHUCH. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– protection class I (SKI)

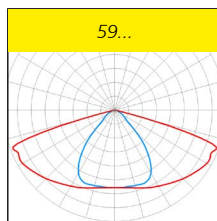
– seawater-resistant version (SWP)

– additional overvoltage protection (OP) in SKI

– inrush current limiter (ESSB)

– 3-point supporting bracket (3P)

– special painting in RAL colours (SL)



Product highlights:

- subsequent use of a lighting management system possible at any time
- tool-free, quick assembly of the light management system components
- standardized Zhaga compliant socket allows free choice of light management system
- ECG with surge voltage resistance 10kV
- optimized thermal management due to direct adaption of the LED-modules to the housing
- service life $L_{90} > 100,000h$
- long-lasting, corrosion resistant die-cast aluminium housing with plain surface. Deposit of greenery and dirt is not possible
- integrated pressure compensation system prevents condensation in the interior
- homogeneous illumination due to the Multi-Layer-Technology
- time- and cost-saving mounting in 2 steps due to tool-free removable lower part of the housing:
 - 1st step:** Hinge upper part with bracket onto the rope and connect the mains
 - 2nd step:** Hinge lower part, connect isolating plug, shut the housing and close. **READY**
- universal usage on cross- and longitudinal ropes, inclined ropes or 3-point rope supports (see accessories) due to all-side rotatable and up to 15° inclinable stainless steel bracket
- tool-free disconnection (also electrical!) of the lower part from the upper part allows a comfortable replacement of the components at site or in the workshop, extensive dismantling of the fitting or uncomfortable "over-head working" is not necessary
- eco-friendly, no light emission into the upper half-space, $ULOR=0$
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and Socket
- GreenLine luminaire, outstanding sustainable design

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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59... RFLO



with a socket on the top side of the luminaire
colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

59002 0005	59 1603 RFLO	35	6.070	173	6,6
59002 0006	59 3203 RFLO	70	12.080	173	7,0

colour temperature 3.000K (light colour 730)

59002 0007	59 1603 730 RFLO	35	5.770	165	6,6
59002 0008	59 3203 730 RFLO	70	11.480	164	7,0

Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.

RFL LIMAS HUB3 G2 / RFL LIMAS HUB3 G2 GPS SIM



RFL DS20 HUB 20lux ON/OFF



LIMAS USB-Dongle



Optionally also with 3-point mounting (3P)



System components

Article No.	Type	
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	radio control with GPS antenna and photocell (twilight control) with integrated SIM card
90546 9014	RFL LIMAS HUB3 G2	radio control with photocell (twilight control)
90546 9000	RFL DS20 HUB 20lux ON/OFF	twilight switch for autonomous control of RFLO luminaires

Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

Control components

Article No.	Type	
90545 0001	LIMAS Dongle USB	enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	control element with photocell/ twilight switch, GPS antenna and SIM card

Accessories / Spare Parts

Article no.	Type	
49001 9003	ABD 59	cover, pane safety glass clear, for 59...



PENDO Rope Supported LED Light Fitting Series 49 ...

Applications:

Through, collecting and main roads etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Lower section** with LED-Module, optics, glass cover and ECG, tool-free hingeable and detachable.

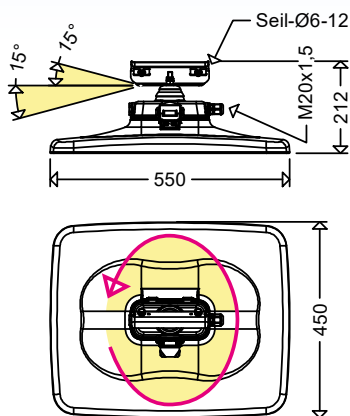
Upper section with bracket, adjustment of inclination, cable entry with pressure compensation system.

Glass cover: Flat safety glass, impact resistance IK10.

Light distribution: Symmetrical wide beam.

Connecting terminal: With plug-in connection in junction box between upper and lower section, tool-free separation of upper and lower section.

Mounting: Stainless steel. Turnable (all directions) and adjustable by 15°, mountable on ropes of 6 - 12mm diameter.



Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

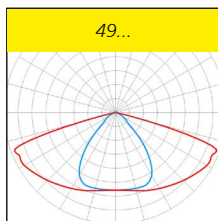
Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

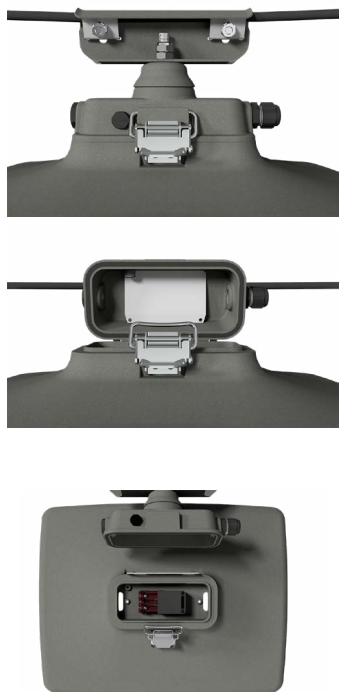
Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- adaptive Light EcoTune (ET)
- seawater-resistant version (SWP)
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- 3-point supporting bracket (3P)
- special painting in RAL colours (SL)



Outstanding mounting advantage



Product highlights:

- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant die-cast aluminium housing with plain surface. Deposit of greenery and dirt is not possible
- integrated pressure compensation system prevents condensation in the interior
- time- and cost-saving mounting in 2 steps due to tool-free removable lower part of the housing:
1st step: Hinge upper part with bracket onto the rope and connect the mains.
2nd step: Hinge lower part, connect isolating plug, shut the housing and close. **READY**
- universal usage on cross- and longitudinal ropes, inclined ropes or 3-point rope supports (see accessories) due to all-side rotatable and up to 15° inclinable stainless steel bracket
- tool-free disconnection (also electrical!) of the lower part from the upper part allows a comfortable replacement of the components at site or in the workshop, extensive dismantling of the fitting or uncomfortable "over-head working" is not necessary
- efficient and optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the **Multi-Layer technology** i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping. No dark zones in the road if any single LED would fail and the uniformity of the illumination is kept.
- eco-friendly, no light emission into the upper half-space, **ULOR=0**
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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49...



All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

colour temperature 4.000K (light colour 740)

49000 0005	49 6401	69	12.580	182	11,8
49000 0006	49 6402	99	17.520	177	11,8
49000 0002	49 6403	140	23.570	168	11,8

colour temperature 3.000K (light colour 730)

49000 0069	49 6401 730	69	11.950	173	11,8
49000 0007	49 6402 730	99	16.640	168	11,8
49000 0070	49 6403 730	140	22.390	160	11,8

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

Optionally also with 3-point mounting (3P)



Accessories / Spare Parts

Article no.	Type	
49001 9001	ABD 49	cover, pane safety glass clear, for 49...

NEW

PENDO

Rope Supported LED Light Fitting with variable setting of the luminous flux

Series 49 ... VARIO



Applications:

Through, collecting and main roads etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Lower section** with LED-Module, optics, glass cover and ECG, tool-free hingeable and detachable. **Upper section** with bracket, adjustment of inclination, cable entry with pressure compensation system. **Glass cover:** Flat safety glass, impact

resistance IK10.

Light distribution: Symmetrical wide beam.

Switch for setting the luminous flux of the luminaire.

Connecting terminal: With plug-in connection in junction box between upper and lower section, tool-free separation of upper an lower section.

Mounting: Stainless steel. Turnable (all directions) and adjustable by 15°, mountable on ropes of 6 - 12mm diameter.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

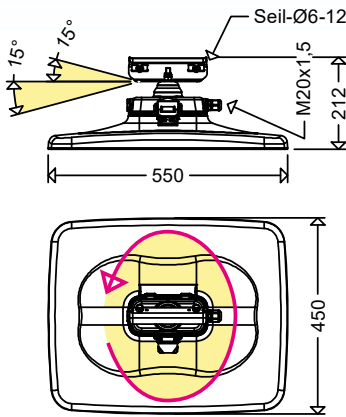
On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

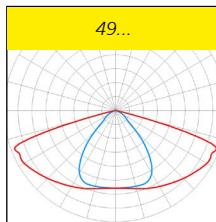
Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.



Outstanding mounting advantage



Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- adaptive Light EcoTune (ET)
- seawater-resistant version (SWP)
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- 3-point supporting bracket (3P)
- with variable setting of the luminous flux via app (VARIO NFC)
- special painting in RAL colours (SL)

Product highlights:

- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant die-cast aluminium housing with plain surface. Deposit of greenery and dirt is not possible
- integrated pressure compensation system prevents condensation in the interior
- time- and cost-saving mounting in 2 steps due to tool-free removable lower part of the housing: **1st step:** Hinge upper part with bracket onto the rope and connect the mains. **2nd step:** Hinge lower part, connect isolating plug, shut the housing and close. **READY**
- universal usage on cross- and longitudinal ropes, inclined ropes or 3-point rope supports (see accessories) due to all-side rotatable and up to 15° inclinable stainless steel bracket
- tool-free disconnection (also electrical!) of the lower part from the upper part allows a comfortable replacement of the components at site or in the workshop, extensive dismantling of the fitting or uncomfortable "over-head working" is not necessary
- efficient and optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the **Multi-Layer technology** i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping. No dark zones in the road if any single LED would fail and the uniformity of the illumination is kept.
- eco-friendly, no light emission into the upper half-space, **ULOR=0**
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the **Dark Sky requirements**
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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49... VARIO



The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

colour temperature 4.000K (light colour 740)

49004 0001	49 L210 VARIO	32 - 140	5.790 - 23.570	181	2 x HST 70 - HME 400	11,8
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colour temperature 3.000K (light colour 730)

49004 0002	49 L210 VARIO 730	32 - 140	5.500 - 22.390	180	2 x HST 70 - HME 400	11,8
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Factory setting L210: 140 W; replaces approx. HME 400

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. ¹⁾ possible setting range

! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

Optionally also with 3-point mounting (3P)



Accessories / Spare Parts

Article no.	Type	
49001 9001	ABD 49	cover, pane safety glass clear, for 49...



PENDO Rope Supported LED Light Fitting Ready for Light Management System Series 49 ... RFL

Applications:

Through, collecting and main roads etc.

Design:

The luminaires are prepared for the subsequent use of a light management system. An integrated socket allows retrofitting of light management components without tools.

Housing: Die-cast aluminium, 2-parts, powder coated in DB 702 (mica-iron paint, grey). **Lower section** with LED-Module, optics, glass cover and ECG, tool-free hingeable and detachable.

Upper section with bracket, adjustment of inclination, cable entry with pressure compensation system.

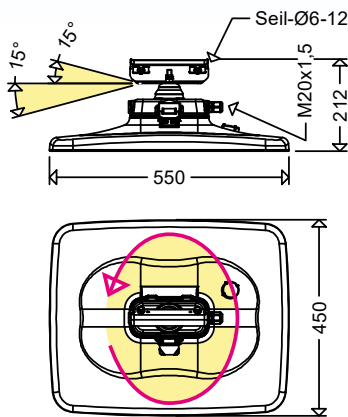
Zhaga compliant socket on the top side of the housing.

Glass cover: Flat safety glass, impact resistance IK10.

Light distribution: Symmetrical wide beam.

Connecting terminal: With plug-in connection in junction box between upper and lower section, tool-free separation of upper and lower section.

Mounting: Stainless steel. Turnable (all directions) and adjustable by 15°, mountable on ropes of 6 - 12mm diameter.



Exclusively D4i control gear is being used in RFL luminaires from SCHUCH.

All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from SCHUCH. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

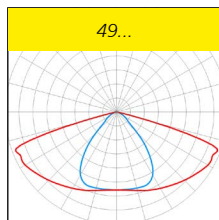
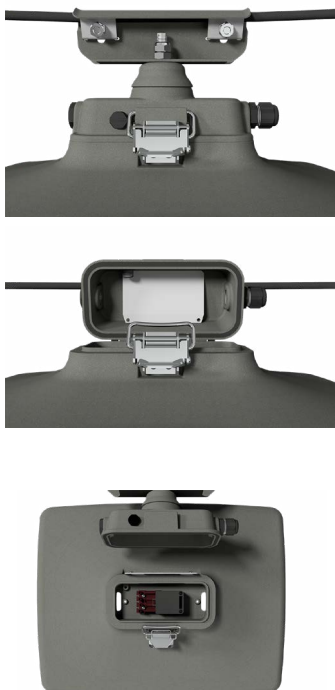
Light control:

On request, the luminaires are also available with the following configurations:

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming steps.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Outstanding mounting advantage



Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- adaptive Light EcoTune (ET)
- seawater-resistant version (SWP)
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- 3-point supporting bracket (3P)
- special painting in RAL colours (SL)

Product highlights:

- subsequent use of a lighting management system possible at any time
- tool-free, quick assembly of the light management system components
- standardized Zhaga compliant socket allows free choice of light management system
- ECG with surge voltage resistance 10kV
- optimized thermal management due to direct adaption of the LED-modules to the housing
- long-lasting, corrosion resistant die-cast aluminium housing with plain surface. Deposit of greenery and dirt is not possible
- integrated pressure compensation system prevents condensation in the interior
- homogeneous illumination due to the Multi-Layer-Technology
- time- and cost-saving mounting in 2 steps due to tool-free removable lower part of the housing:
 - 1st step:** Hinge upper part with bracket onto the rope and connect the mains
 - 2nd step:** Hinge lower part, connect isolating plug, shut the housing and close. **READY**
- universal usage on cross- and longitudinal ropes, inclined ropes or 3-point rope supports (see accessories) due to all-side rotatable and up to 15° inclinable stainless steel bracket
- tool-free disconnection (also electrical!) of the lower part from the upper part allows a comfortable replacement of the components at site or in the workshop, extensive dismantling of the fitting or uncomfortable "over-head working" is not necessary
- eco-friendly, no light emission into the upper half-space, ULOR=0
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and Socket
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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49... RFLO



with a socket on the top side of the luminaire
colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

49002 0006	49 6402 RFLO	99	17.520	177	11,8
49002 0006	49 6403 RFLO	140	23.570	168	11,8

colour temperature 3.000K (light colour 730)

49002 0008	49 6402 730 RFLO	99	16.640	168	11,8
49002 0008	49 6403 730 RFLO	140	22.390	160	11,8

Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.

RFL LIMAS HUB3 G2 / RFL LIMAS HUB3 G2 GPS SIM



RFL DS20 HUB 20lux ON/OFF



LIMAS USB-Dongle



System components

Article No.	Type	
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	radio control with GPS antenna and photocell (twilight control) with integrated SIM card
90546 9014	RFL LIMAS HUB3 G2	radio control with photocell (twilight control)
90546 9000	RFL DS20 HUB 20lux ON/OFF	twilight switch for autonomous control of RFL0 luminaires

Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

Control components

Article No.	Type	
90545 0001	LIMAS Dongle USB	enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	control element with photocell/ twilight switch, GPS antenna and SIM card

Optionally also with 3-point mounting (3P)

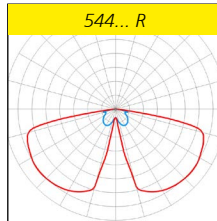
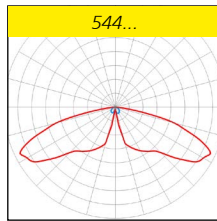
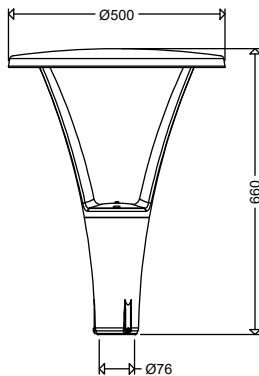


Accessories / Spare Parts

Article no.	Type	
49001 9001	ABD 49	cover, pane safety glass clear, for 49...

NEW

KONIC LED Pole-Top Light Fitting Series 544... G2



Applications:

544... AB:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

544... R:

Promenades, public parks, pedestrian areas etc.

Design:

Housing: Die-cast aluminium, threepart, powder coated DB 702 (mica-iron paint, grey).

Lower section with electrical components, cable entry, plug-type device and cable

retainer for connection cable.

Connecting struts with cable feed-through.

Upper part with LED-modules and optics.
Cover: flat safety glass, impact resistance IK09

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight pole end Ø of 76mm. Adapter (RZ 1) for pole end Ø of 60mm (see accessories / spare parts).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$; Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– seawater-resistant version (SWP)

– for connection to group or central battery systems (ZB) or emergency lighting networks respectively

– with increased luminous flux

– special painting in RAL colours (SL)



Product highlights:

- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant aluminium housing with plain surface
- optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- good glare limitation due to frosted cover
- easy to install, to maintain and to retrofit
 - removable upper part of the housing allows time- and cost-saving mounting, mains connection terminal within the supporting section
 - fast maintenance due to an easily interchangeable gear-tray system (modular concept) within the supporting section, ECG can be replaced on-site
 - upgrades or converts in regards to technical development of the LED without problems by change of the upper part of the housing, after the change of the LED-modules the upper part of the housing can be used again
- BlackEdition, ULOR=0%
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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544... G2



asymmetrical wide beam

colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

54404 0001	544 0801 G2	9	1.410	157	9,5
54404 0002	544 0802 G2	13	1.970	152	9,5
54404 0003	544 0803 G2	18	2.680	149	9,5
54404 0004	544 1601 G2	17	2.730	161	9,6
54404 0005	544 1602 G2	25	3.820	153	9,6
54404 0006	544 1603 G2	35	5.180	148	9,6
54404 0007	544 2401 G2	26	4.110	158	9,7
54404 0008	544 2402 G2	37	5.730	155	9,7
54404 0009	544 2403 G2	53	7.750	146	9,7

colour temperature 3.000K (light colour 730)

54404 0010	544 0801 G2 730	9	1.340	149	9,5
54404 0011	544 0802 G2 730	13	1.870	144	9,5
54404 0012	544 0803 G2 730	18	2.550	142	9,5
54404 0013	544 1601 G2 730	17	2.590	152	9,6
54404 0014	544 1602 G2 730	25	3.630	145	9,6
54404 0015	544 1603 G2 730	35	4.920	141	9,6
54404 0016	544 2401 G2 730	26	3.900	150	9,7
54404 0017	544 2402 G2 730	37	5.440	147	9,7
54404 0018	544 2403 G2 730	53	7.360	139	9,7

544... R G2



symmetrical circular beam

colour temperature 4.000K (light colour 740)

54404 0019	544 0801R G2	9	1.410	157	9,5
54404 0020	544 0802R G2	13	1.970	152	9,5
54404 0021	544 0803R G2	18	2.680	149	9,5
54404 0022	544 1601R G2	17	2.730	161	9,6
54404 0023	544 1602R G2	25	3.820	153	9,6
54404 0024	544 1603R G2	35	5.180	148	9,6
54404 0025	544 2401R G2	26	4.110	158	9,7
54404 0026	544 2402R G2	37	5.730	155	9,7
54404 0027	544 2403R G2	53	7.750	146	9,7

colour temperature 3.000K (light colour 730)

54404 0028	544 0801R G2 730	9	1.340	149	9,5
54404 0029	544 0802R G2 730	13	1.870	144	9,5
54404 0030	544 0803R G2 730	18	2.550	142	9,5
54404 0031	544 1601R G2 730	17	2.590	152	9,6
54404 0032	544 1602R G2 730	25	3.630	145	9,6
54404 0033	544 1603R G2 730	35	4.920	141	9,6
54404 0034	544 2401R G2 730	26	3.900	150	9,7
54404 0035	544 2402R G2 730	37	5.440	147	9,7
54404 0036	544 2403R G2 730	53	7.360	139	9,7

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Accessories / Spare Parts

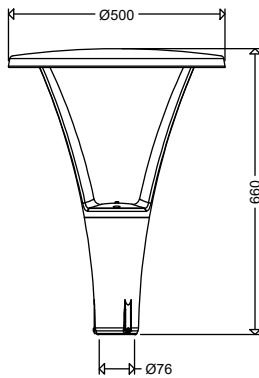
Article No.	Type	
54410 0001	ABD 544 G2	cover, pane safety glass clear, for 544...
90113 0016	HA 08/L25 VS	backside light shielding for 544 08..
90113 0017	HA 16/L50 VS	backside light shielding for 544 16..
90113 0018	HA 24/L75 VS	backside light shielding for 544 24..

NEW

KONIC

LED Pole-Top Light Fitting with variable setting of the luminous flux

Series 544... G2 VARIO



Applications:

544...:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

544... R:

Promenades, public parks, pedestrian areas etc.

Design:

Housing: Die-cast aluminium, threepart, powder coated DB 702 (mica-iron paint, grey).

Lower section with electrical components, cable entry, plug-type device and cable retainer for connection cable.

Connecting struts with cable feed-through.

Upper part with LED-modules and optics.

Cover: flat safety glass, impact resistance IK09

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).
Switch for setting the luminous flux of the luminaire.

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight pole end Ø of 76mm. Adapter (RZ 1) for pole end Ø of 60mm (see accessories / spare parts).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$; Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

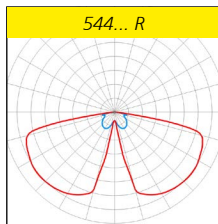
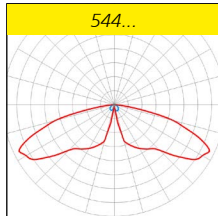
On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.



Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- optics for cycle track (RWX)

- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- with variable setting of the luminous flux via app (VARIO NFC)
- special painting in RAL colours (SL)

Product highlights:

- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- long-lasting, corrosion resistant aluminium housing with plain surface
- optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- good glare limitation due to frosted cover
- easy to install, to maintain and to retrofit
 - removable upper part of the housing allows time- and cost-saving mounting, mains connection terminal within the supporting section
 - fast maintenance due to an easily interchangeable gear-tray system (modular concept) within the supporting section, ECG can be replaced on-site
 - upgrades or converts in regards to technical development of the LED without problems by change of the upper part of the housing, after the change of the LED-modules the upper part of the housing can be used again
- BlackEdition, ULOR=0%
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)



Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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544... G2 VARIO

IP65



Wind load area
A = 0,07m²

The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

asymmetrical wide beam

colour temperature 3.000K (light colour 730)

54405 0001	544 L25 G2 VARIO	5 - 18	640 - 2.680	157	HST 35 - HST 50	9,5
54405 0002	544 L50 G2 VARIO	9 - 35	1.250 - 5.180	162	HST 35 - 2 x HST 70	9,6
54405 0003	544 L100 G2 VARIO	16 - 70	2.460 - 10.080	160	HST 50 - HSE 150	9,8

colour temperature 3.000K (light colour 730)

54405 0004	544 L25 G2 VARIO 730	5 - 18	610 - 2.550	149	HST 35 - HST 50	9,5
54405 0005	544 L50 G2 VARIO 730	9 - 35	1.190 - 4.920	154	HST 35 - 2 x HST 70	9,6
54405 0006	544 L100 G2 VARIO 730	16 - 70	2.340 - 9.580	152	HST 50 - HSE 150	9,8

symmetrical circular beam

colour temperature 4.000K (light colour 740)

54405 0007	544 L25R G2 VARIO	5 - 18	640 - 2.680	157	HST 35 - HST 50	9,5
54405 0008	544 L50R G2 VARIO	9 - 35	1.250 - 5.180	162	HST 35 - 2 x HST 70	9,6
54405 0009	544 L100R G2 VARIO	16 - 70	2.460 - 10.080	160	HST 50 - HSE 150	9,8

colour temperature 3.000K (light colour 730)

54405 0010	544 L25R G2 VARIO 730	5 - 18	610 - 2.550	149	HST 35 - HST 50	9,5
54405 0011	544 L50R G2 VARIO 730	9 - 35	1.190 - 4.920	154	HST 35 - 2 x HST 70	9,6
54405 0012	544 L100R G2 VARIO 730	16 - 70	2.340 - 9.580	152	HST 50 - HSE 150	9,8

Factory setting L25: 18 W; replaces approx. HME 80, HST 50

Factory setting L50: 18 W; replaces approx. HME 125, HST 70

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Factory setting L100: 54 W; replaces approx. HME 250

1) possible setting range

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



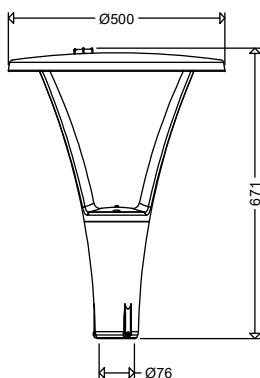
All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Accessories / Spare Parts

Article No.	Type	
54410 0001	ABD 544 G2	cover, pane safety glass clear, for 544...
90113 0016	HA 08/L25 VS	backside light shielding for 544 08..
90113 0017	HA 16/L50 VS	backside light shielding for 544 16..
90113 0019	HA 32/L80/L100 VS	backside light shielding for 544 32..

NEW**KONIC****Ready for Light Management System****Series 544... G2 RFL**
**Applications:**

544...:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

544... R:

Promenades, public parks, pedestrian areas etc.

Design:

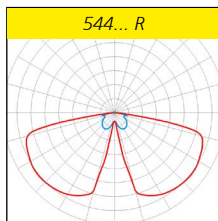
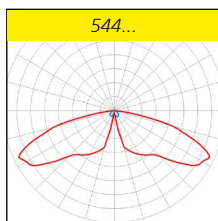
The luminaires are prepared for the subsequent use of a light management system. An integrated socket allows retrofitting of light management components without tools.

Housing: Die-cast aluminium, threepart, powder coated DB 702 (mica-iron paint, grey).**Lower section** with electrical components, cable entry, plug-type device and cable retainer for connection cable.**Connecting struts** with cable feed-through.**Upper part** with LED-modules and optics.**Zhaga compliant socket** on the top side of the housing.**Cover:** flat safety glass, impact resistance IK09**Light distribution:** Asymmetrical wide beam or symmetrical circular beam (R).**Mounting system:** 3 non-corrosive steel locking screws serve for fixation on straight pole end Ø of 76mm. Adapter (RZ 1) for pole end Ø of 60mm (see accessories / spare parts).

Exclusively D4i control gear is being used in RFL luminaires from SCHUCH. All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from SCHUCH. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Electrical design:**LED module:** 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant**ECG:** 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.**Light control:**

On request, the luminaires are also available with the following configurations:

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire service life of the LED-modules.**Options:**

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- optics for cycle track (RWX)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- with increased luminous flux
- special painting in RAL colours (SL)

Product highlights:

- subsequent use of a lighting management system possible at any time
- tool-free, quick assembly of the light management system components
- standardized Zhaga compliant socket allows free choice of light management system
- ECG with surge voltage resistance 10kV
- optimized thermal management due to direct adaption of the LED-modules to the housing
- service life $L_{90} > 100,000h$
- long-lasting, corrosion resistant aluminium housing with plain surface
- optimal light distribution due to highly efficient lens optics
- easy to install, to maintain and to retrofit
 - removable upper part of the housing allows time- and cost-saving mounting, mains connection terminal within the supporting section
 - fast maintenance due to an easily interchangeable gear-tray system (modular concept) within the supporting section, ECG can be replaced on-site
 - upgrades or converts in regards to technical development of the LED without problems by change of the upper part of the housing, after the change of the LED-modules the upper part of the housing can be used again
- BlackEdition, ULOR=0%
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and Socket

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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544... RFLO



with a socket on the top side of the luminaire

asymmetrical wide beam

colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

54406 0001	544 0803 G2 RFLO	18	2.680	149	9,5
54406 0002	544 1603 G2 RFLO	35	5.180	148	9,6
54406 0003	544 2403 G2 RFLO	53	7.750	146	9,7

colour temperature 3.000K (light colour 730)

54406 0004	544 0803 G2 730 RFLO	18	2.550	142	9,5
54406 0005	544 1603 G2 730 RFLO	35	4.920	141	9,6
54406 0006	544 2403 G2 730 RFLO	53	7.360	139	9,7

544... R RFLO



with a socket on the top side of the luminaire

symmetrical circular beam

colour temperature 4.000K (light colour 740)

54406 0007	544 0803R G2 RFLO	18	2.680	149	9,5
54406 0008	544 1603R G2 RFLO	35	5.180	148	9,6
54406 0009	544 2403R G2 RFLO	53	7.750	146	9,7

colour temperature 3.000K (light colour 730)

54406 0010	544 0803R G2 730 RFLO	18	2.550	142	9,5
54406 0011	544 1603R G2 730 RFLO	35	4.920	141	9,6
54406 0012	544 2403R G2 730 RFLO	53	7.360	139	9,7

Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.

RFL LIMAS HUB3 G2 / RFL LIMAS HUB3 G2 GPS SIM



RFL DS20 HUB 20lux ON/OFF



LIMAS USB-Dongle



System components

Article No.	Type	
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	radio control with GPS antenna and photocell (twilight control) with integrated SIM card
90546 9014	RFL LIMAS HUB3 G2	radio control with photocell (twilight control)
90546 9000	RFL DS20 HUB 20lux ON/OFF	twilight switch for autonomous control of RFLO luminaires

Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

Control components

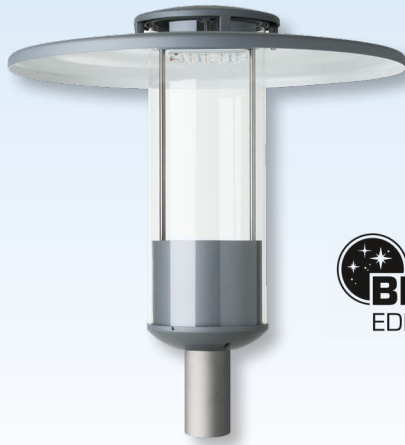
Article No.	Type	
90545 0001	LIMAS Dongle USB	enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	control element with photocell/ twilight switch, GPS antenna and SIM card

Accessories / Spare Parts

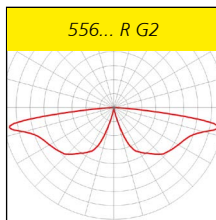
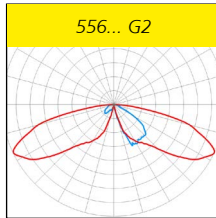
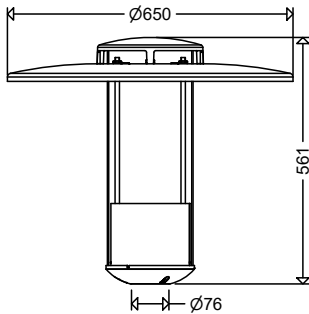
Article No.	Type	
54410 0001	ABD 544 G2	cover, pane safety glass clear, for 544...
90113 0016	HA 08/L25 VS	backside light shielding for 544 08..
90113 0017	HA 16/L50 VS	backside light shielding for 544 16..
90113 0018	HA 24/L75 VS	backside light shielding for 544 24..

NEW

CUPINA LED Pole-Top Light Fitting Series 556... G2



**BLACK
EDITION**



Applications:

556... G2:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

556... R G2:

Promenades, public parks, pedestrian areas etc.

Design :

Roof and supporting section: Aluminium, powder-coated DB 702 (mica-iron paint, grey).

Cover: PMMA, clear, cylindrical.

Electrical components: Wired ready for installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– for connection to group or central bat-

tery systems (ZB) or emergency lighting networks respectively

– seawater-resistant version (SWP)

– Ready for Light Management Systems (RFL), only possible without accessory ring mirror

– special painting in RAL colours (SL)

Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping
- quick installation, maintenance and conversion thanks to tool-free opening of the light fitting and tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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556... G2



asymmetrical wide beam

colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

55600 0001	556 0801 G2	9	1.430	159	6,7
55600 0002	556 0802 G2	13	2.000	154	6,7
55600 0003	556 0803 G2	18	2.690	149	6,7
55600 0004	556 1601 G2	17	2.850	168	6,8
55600 0005	556 1602 G2	25	3.950	158	6,8
55600 0006	556 1603 G2	35	5.280	151	6,8

colour temperature 3.000K (light colour 730)

55600 0013	556 0801 G2 730	9	1.360	151	6,7
55600 0014	556 0802 G2 730	13	1.900	146	6,7
55600 0015	556 0803 G2 730	18	2.560	142	6,7
55600 0016	556 1601 G2 730	17	2.710	159	6,8
55600 0017	556 1602 G2 730	25	3.750	150	6,8
55600 0018	556 1603 G2 730	35	5.020	143	6,8

symmetrical circular beam

colour temperature 4.000K (light colour 740)

55600 0007	556 0801R G2	9	1.430	144	6,7
55600 0008	556 0802R G2	13	2.000	135	6,7
55600 0009	556 0803R G2	18	2.690	152	6,7
55600 0010	556 1601R G2	17	2.850	156	6,8
55600 0011	556 1602R G2	25	3.950	142	6,8
55600 0012	556 1603R G2	35	5.280	135	6,8

colour temperature 3.000K (light colour 730)

55600 0019	556 0801R G2 730	9	1.360	151	6,7
55600 0020	556 0802R G2 730	13	1.900	146	6,7
55600 0021	556 0803R G2 730	18	2.560	142	6,7
55600 0022	556 1601R G2 730	17	2.710	159	6,8
55600 0023	556 1602R G2 730	25	3.750	150	6,8
55600 0024	556 1603R G2 730	35	5.020	143	6,8



with ring mirror

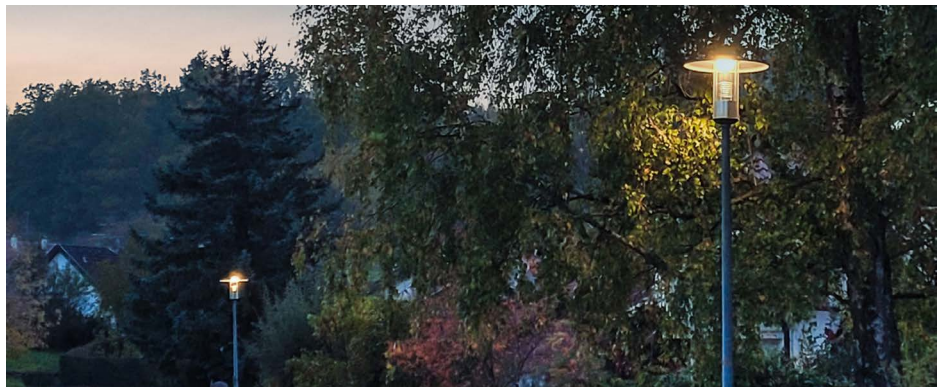


with frosted board cover



with frosted board cover and ring mirror

! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

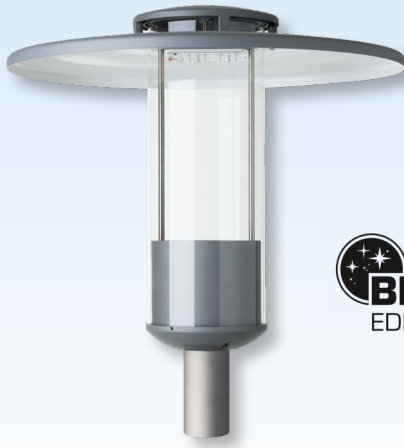


Accessories / Spare Parts

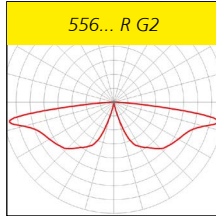
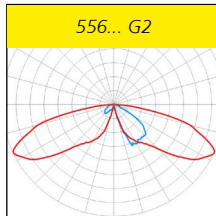
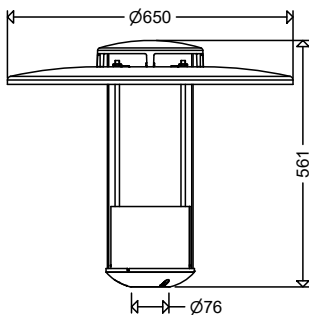
Article no.	Type	
10051 9000	ABD 541/55.	cover, cylinder PMMA clear, for 541, 553, 556, 557, 558...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 556 08..
90113 0017	HA 16/L50 VS	backside light shielding for 556 16..
90113 0008	HA 08/L25 LE	backside light shielding for 556 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 556 16.. R
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90126 0001	RZ 1 RAL9005	adapter for mast top Ø 60mm

NEW

CUPINA LED Pole-Top Light Fitting with variable setting of the luminous flux Series 556... G2 VARIO



**BLACK
EDITION**



Applications:

556... G2:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

556... R G2:

Promenades, public parks, pedestrian areas etc.

Design :

Roof and supporting section: Aluminium, powder-coated DB 702 (mica-iron paint, grey).

Cover: PMMA, clear, cylindrical.

Electrical components: Wired ready for

installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Switch for setting the luminous flux of the luminaire.

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber”
(approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– for connection to group or central bat-

tery systems (ZB) or emergency lighting networks respectively

– seawater-resistant version (SWP)

– Ready for Light Management Systems (RFL), only possible without accessory ring mirror

– special painting in RAL colours (SL)

Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping
- quick installation, maintenance and conversion thanks to tool-free opening of the light fitting and tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

! Properties, limitations and details for controlling LED-light fittings:

■ See “Technical Supplement”

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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556... G2 VARIO



The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

asymmetrical wide beam

colour temperature 3.000K (light colour 730)

55601 0002	556 L25 G2 VARIO	5 - 18	660 - 2.690	144	HST 35 - HST 50	6,7
55601 0003	556 L50 G2 VARIO	9 - 35	1.320 - 5.280	156	HST 35 - 2 x HST 70	6,8

colour temperature 3.000K (light colour 730)

55601 0004	556 L25 G2 VARIO 730	5 - 18	630 - 2.560	136	HST 35 - HST 50	6,7
55601 0005	556 L50 G2 VARIO 730	9 - 35	1.250 - 5.020	147	HST 35 - 2 x HST 70	6,8

symmetrical circular beam

colour temperature 4.000K (light colour 740)

55601 0006	556 L25R G2 VARIO	5 - 18	660 - 2.690	144	HST 35 - HST 50	6,7
55601 0007	556 L50R G2 VARIO	9 - 35	1.320 - 5.280	156	HST 35 - 2 x HST 70	6,8

colour temperature 3.000K (light colour 730)

55601 0008	556 L25R G2 VARIO 730	5 - 18	630 - 2.560	136	HST 35 - HST 50	6,7
55601 0009	556 L50R G2 VARIO 730	9 - 35	1.250 - 5.020	147	HST 35 - 2 x HST 70	6,8

Factory setting L25: 18 W; replaces approx. HME 80, HST 50

Factory setting L50: 18 W; replaces approx. HME 125, HST 70

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



with ring mirror



with frosted board cover



with frosted board cover and ring mirror



Accessories / Spare Parts

Article no.	Type	
10051 9000	ABD 541/55.	cover, cylinder PMMA clear, for 541, 553, 556, 557, 558...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 556 08..
90113 0017	HA 16/L50 VS	backside light shielding for 556 16..
90113 0008	HA 08/L25 LE	backside light shielding for 556 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 556 16.. R
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90126 0001	RZ 1 RAL9005	adapter for mast top Ø 60mm

NEW

PLANEO LED Pole-Top Light Fitting Series 557... G2



**BLACK
EDITION**

Applications:

557... G2:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

557... R G2:

Promenades, public parks, pedestrian areas etc.

Design :

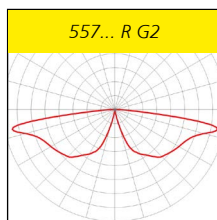
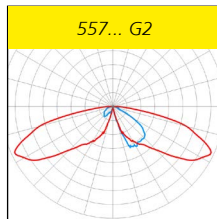
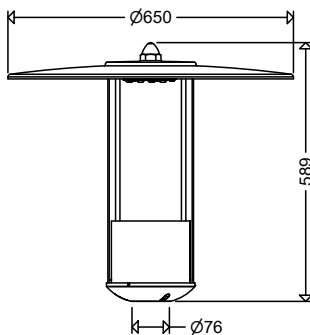
Roof and supporting section: Aluminium, powder-coated DB 702 (mica-iron paint, grey)

Cover: PMMA, clear, cylindrical

Electrical components: Wired ready for installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).



Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000$ h, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

– 2,200K, light colour 722

– (approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

– (approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– for connection to group or central battery systems (ZB) or emergency lighting

networks respectively

– seawater-resistant version (SWP)

– Ready for Light Management Systems (RFL), only possible without accessory ring mirror

– special painting in RAL colours (SL)

Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping
- quick maintenance and conversion thanks to tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packingmaterial)
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IP54  Wind load area A = 0,13m²

557... G2

asymmetrical wide beam

colour temperature 4.000K (light colour 740)

55701 0001	557 0801 G2	9	1.430	159	5,9
55701 0002	557 0802 G2	13	2.000	154	5,9
55701 0003	557 0803 G2	18	2.690	149	5,9
55701 0004	557 1601 G2	17	2.850	168	6,0
55701 0005	557 1602 G2	25	3.950	158	6,0
55701 0006	557 1603 G2	35	5.280	151	6,0

colour temperature 3.000K (light colour 730)

55701 0013	557 0801 G2 730	9	1.360	151	5,9
55701 0014	557 0802 G2 730	13	1.900	146	5,9
55701 0015	557 0803 G2 730	18	2.560	142	5,9
55701 0016	557 1601 G2 730	17	2.710	159	6,0
55701 0017	557 1602 G2 730	25	3.750	150	6,0
55701 0018	557 1603 G2 730	35	5.020	143	6,0

symmetrical circular beam

colour temperature 4.000K (light colour 740)

55701 0007	557 0801R G2	9	1.430	159	5,9
55701 0008	557 0802R G2	13	2.000	154	5,9
55701 0009	557 0803R G2	18	2.690	149	5,9
55701 0010	557 1601R G2	17	2.850	168	6,0
55701 0011	557 1602R G2	25	3.950	158	6,0
55701 0012	557 1603R G2	35	5.280	151	6,0

colour temperature 3.000K (light colour 730)

55701 0013	557 0801R G2 730	9	1.360	151	5,9
55701 0014	557 0802R G2 730	13	1.900	146	5,9
55701 0015	557 0803R G2 730	18	2.560	142	5,9
55701 0016	557 1601R G2 730	17	2.710	159	6,0
55701 0017	557 1602R G2 730	25	3.750	150	6,0
55701 0018	557 1603R G2 730	35	5.020	143	6,0

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



with ring mirror

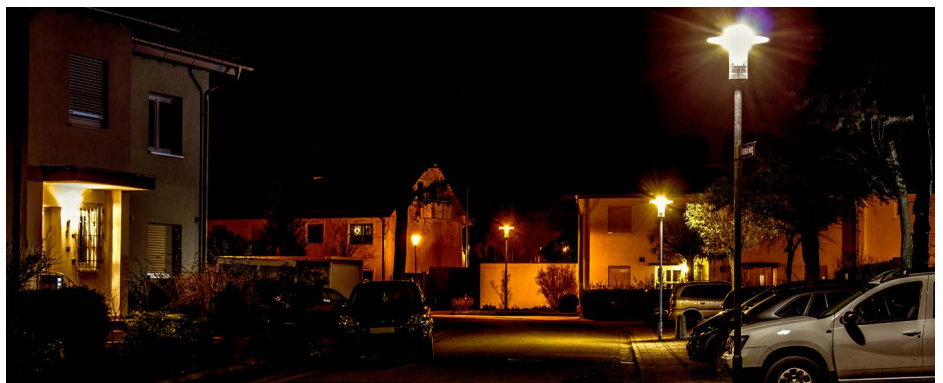


with frosted board cover



with frosted board cover and ring mirror

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Accessories / Spare Parts

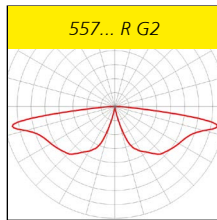
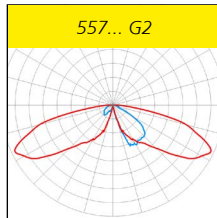
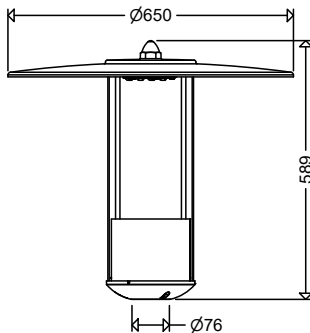
Article no.	Type	
10051 9000	ABD 541/55.	cover, cylinder PMMA clear, for 541, 553, 556, 557, 558...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 557 08..
90113 0017	HA 16/L50 VS	backside light shielding for 557 16..
90113 0008	HA 08/L25 LE	backside light shielding for 557 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 557 16.. R
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90126 0001	RZ 1 RAL9005	adapter for mast top Ø 60mm

NEW

PLANEO

LED Pole-Top Light Fitting with variable setting of the luminous flux

Series 557... G2 VARIO

Applications:

557... G2:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

557... R G2:

Promenades, public parks, pedestrian areas etc.

Design :

Roof and supporting section: Aluminium, powder-coated DB 702 (mica-iron paint, grey)

Cover: PMMA, clear, cylindrical

Electrical components: Wired ready for

installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Switch for setting the luminous flux of the luminaire.

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– for connection to group or central bat-

tery systems (ZB) or emergency lighting networks respectively

– seawater-resistant version (SWP)

– Ready for Light Management Systems

(RFL), only possible without accessory ring mirror

– special painting in RAL colours (SL)

Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping
- quick maintenance and conversion thanks to tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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557... G2 VARIO



The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

asymmetrical wide beam

colour temperature 3.000K (light colour 730)

55702 0002	557 L25 G2 VARIO	5 - 18	660 - 2.690	144	HST 35 - HST 50	5,9
55702 0001	557 L50 G2 VARIO	9 - 35	1.320 - 5.280	156	HST 35 - 2 x HST 70	6,0

colour temperature 3.000K (light colour 730)

55702 0003	557 L25 G2 VARIO 730	5 - 18	630 - 2.560	136	HST 35 - HST 50	5,9
55702 0004	557 L50 G2 VARIO 730	9 - 35	1.250 - 5.020	147	HST 35 - 2 x HST 70	6,0

symmetrical circular beam

colour temperature 4.000K (light colour 740)

55702 0005	557 L25R G2 VARIO	5 - 18	660 - 2.690	144	HST 35 - HST 50	5,9
55702 0006	557 L50R G2 VARIO	9 - 35	1.320 - 5.280	156	HST 35 - 2 x HST 70	6,0

colour temperature 3.000K (light colour 730)

55702 0007	557 L25R G2 VARIO 730	5 - 18	630 - 2.560	136	HST 35 - HST 50	5,9
55702 0008	557 L50R G2 VARIO 730	9 - 35	1.250 - 5.020	147	HST 35 - 2 x HST 70	6,0

Factory setting L25: 18 W; replaces approx. HME 80, HST 50

Factory setting L50: 18 W; replaces approx. HME 125, HST 70

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



with ring mirror



with frosted board cover



with frosted board cover and ring mirror

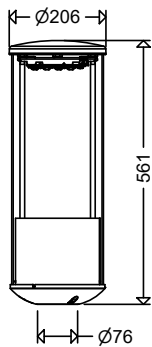


Accessories / Spare Parts

Article no.	Type	
10051 9000	ABD 541/55.	cover, cylinder PMMA clear, for 541, 553, 556, 557, 558...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 557 08..
90113 0017	HA 16/L50 VS	backside light shielding for 557 16..
90113 0008	HA 08/L25 LE	backside light shielding for 557 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 557 16.. R
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90126 0001	RZ 1 RAL9005	adapter for mast top Ø 60mm

NEW

CILA LED Pole-Top Light Fitting Series 558... G2



Applications:

558... G2:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

558... R G2:

Promenades, public parks, pedestrian areas etc. **Design :**

Roof and supporting section: Aluminium, powder-coated DB 702 (mica-iron paint, grey)

Cover: PMMA, clear, cylindrical

Electrical components: Wired ready for installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

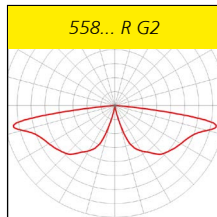
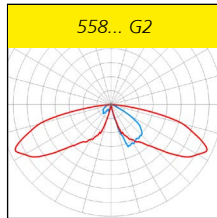
On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.



Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– for connection to group or central battery systems (ZB) or emergency lighting

networks respectively

– seawater-resistant version (SWP)

– Ready for Light Management Systems (RFL), only possible without accessory ring mirror

– special painting in RAL colours (SL)

Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping
- quick installation, maintenance and conversion thanks to tool-free opening of the light fitting and tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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558... G2



asymmetrical wide beam

colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

55801 0001	558 0801 G2	9	1.430	159	4,7
55801 0002	558 0802 G2	13	2.000	154	4,7
55801 0003	558 0803 G2	18	2.690	149	4,7
55801 0004	558 1601 G2	17	2.850	168	4,8
55801 0005	558 1602 G2	25	3.950	158	4,8
55801 0006	558 1603 G2	35	5.280	151	4,8

colour temperature 3.000K (light colour 730)

55801 0013	558 0801 G2 730	9	1.360	151	4,7
55801 0014	558 0802 G2 730	13	1.900	146	4,7
55801 0015	558 0803 G2 730	18	2.560	142	4,7
55801 0016	558 1601 G2 730	17	2.710	159	4,8
55801 0017	558 1602 G2 730	25	3.750	150	4,8
55801 0018	558 1603 G2 730	35	5.020	143	4,8

symmetrical circular beam

colour temperature 4.000K (light colour 740)

55801 0007	558 0801R G2	9	1.430	159	4,7
55801 0008	558 0802R G2	13	2.000	154	4,7
55801 0009	558 0803R G2	18	2.690	149	4,7
55801 0010	558 1601R G2	17	2.850	168	4,8
55801 0011	558 1602R G2	25	3.950	158	4,8
55801 0012	558 1603R G2	35	5.280	151	4,8

colour temperature 3.000K (light colour 730)

55801 0019	558 0801R G2 730	9	1.360	151	4,7
55801 0020	558 0802R G2 730	13	1.900	146	4,7
55801 0021	558 0803R G2 730	18	2.560	142	4,7
55801 0022	558 1601R G2 730	17	2.710	159	4,8
55801 0023	558 1602R G2 730	25	3.750	150	4,8
55801 0024	558 1603R G2 730	35	5.020	143	4,8



with ring mirror

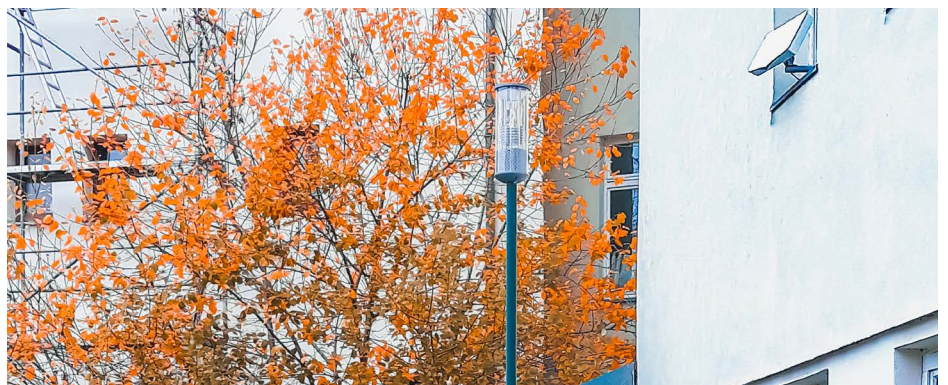


with frosted board cover



with frosted board cover and ring mirror

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Accessories / Spare Parts

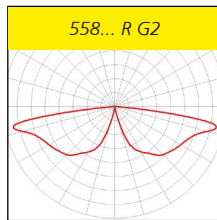
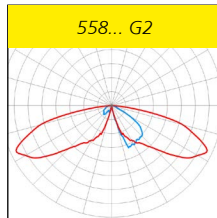
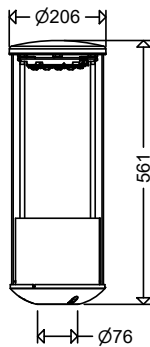
Article no.	Type	
10051 9000	ABD 541/55.	cover, cylinder PMMA clear, for 541, 553, 556, 557, 558...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 558 08..
90113 0017	HA 16/L50 VS	backside light shielding for 558 16..
90113 0008	HA 08/L25 LE	backside light shielding for 558 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 558 16.. R
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90126 0001	RZ 1 RAL9005	adapter for mast top Ø 60mm

NEW**CILA****LED Pole-Top Light Fitting with variable setting of the luminous flux****Series 558... G2 VARIO****Applications:****558... G2:**

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

558... R G2:Promenades, public parks, pedestrian areas etc. **Design :****Roof and supporting section:** Aluminium, powder-coated DB 702 (mica-iron paint, grey)**Cover:** PMMA, clear, cylindrical**Electrical components:** Wired ready for

installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).**Switch** for setting the luminous flux of the luminaire.**Mounting system:** 3 non-corrosive steel locking screws serve for fixation on straight poles \varnothing 76 mm. Adapter (RZ 1) for pole end \varnothing of 60 mm (see accessories / spare parts).**Electrical design:****LED module:** 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000$ h, Zhaga compliant**ECG:** 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.**Light control:**

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.**Output reduction without control phase (LA):** Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.**Digital dimming with DALI interface (DIMD)****Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire service life of the LED-modules.**Options:**

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– for connection to group or central bat-

tery systems (ZB) or emergency lighting networks respectively

– seawater-resistant version (SWP)

– Ready for Light Management Systems (RFL), only possible without accessory ring mirror

– special painting in RAL colours (SL)

Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping
- quick installation, maintenance and conversion thanks to tool-free opening of the light fitting and tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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558... G2 VARIO



The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

asymmetrical wide beam

colour temperature 3.000K (light colour 730)

55802 0002	558 L25 G2 VARIO	5 - 18	660 - 2.690	144	HST 35 - HST 50	4,7
55802 0003	558 L50 G2 VARIO	9 - 35	1.320 - 5.280	156	HST 35 - 2 x HST 70	4,8

colour temperature 3.000K (light colour 730)

55802 0004	558 L25 G2 VARIO 730	5 - 18	630 - 2.560	136	HST 35 - HST 50	4,7
55802 0005	558 L50 G2 VARIO 730	9 - 35	1.250 - 5.020	147	HST 35 - 2 x HST 70	4,8

symmetrical circular beam

colour temperature 4.000K (light colour 740)

55802 0006	558 L25R G2 VARIO	5 - 18	660 - 2.690	144	HST 35 - HST 50	4,7
55802 0007	558 L50R G2 VARIO	9 - 35	1.320 - 5.280	156	HST 35 - 2 x HST 70	4,8

colour temperature 3.000K (light colour 730)

55802 0008	558 L25R G2 VARIO 730	5 - 18	630 - 2.560	136	HST 35 - HST 50	4,7
55802 0009	558 L50R G2 VARIO 730	9 - 35	1.250 - 5.020	147	HST 35 - 2 x HST 70	4,8

Factory setting L25: 18 W; replaces approx. HME 80, HST 50

Factory setting L50: 18 W; replaces approx. HME 125, HST 70

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



with ring mirror



with frosted board cover



with frosted board cover and ring mirror

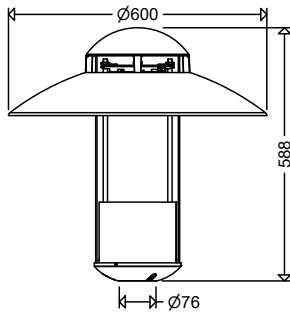


Accessories / Spare Parts

Article no.	Type	
10051 9000	ABD 541/55.	cover, cylinder PMMA clear, for 541, 553, 556, 557, 558...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 558 08..
90113 0017	HA 16/L50 VS	backside light shielding for 558 16..
90113 0008	HA 08/L25 LE	backside light shielding for 558 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 558 16.. R
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90126 0001	RZ 1 RAL9005	adapter for mast top Ø 60mm

NEW

CAPA LED Pole-Top Light Fitting Series 541... G2



Applications:

541... G2:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

541... R G2:

Promenades, public parks, pedestrian areas etc.

Design:

Supporting section, roof and top cover:

Aluminium, powder-coated DB 702 (mica-iron paint, grey).

Cover: PMMA, clear, cylindrical

Electrical components: Wired ready for installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight pole end Ø of 76mm. Adapter (RZ 1) for pole end Ø of 60mm (see accessories / spare parts).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000$ h, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

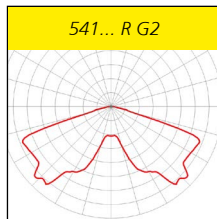
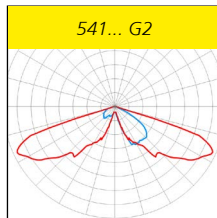
On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.



Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– for connection to group or central battery systems (ZB) or emergency lighting

networks respectively

– seawater-resistant version (SWP)

– Ready for Light Management Systems (RFL), only possible without accessory ring mirror

– special painting in RAL colours (SL)



Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping. Any failure of a particular single LED will not create any dark zones in the road. The uniformity of the illumination is kept
- quick installation, maintenance and conversion thanks to tool-free opening of the light fitting and tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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541... G2

IP54



Wind load area
A = 0,13m²

asymmetrical wide beam

colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

54100 0001	541 0801 G2	9	1.380	153	7,1
54100 0002	541 0802 G2	13	1.920	148	7,1
54100 0003	541 0803 G2	18	2.590	144	7,1
54100 0004	541 1601 G2	17	2.740	161	7,2
54100 0005	541 1602 G2	25	3.800	152	7,2
54100 0006	541 1603 G2	35	5.080	145	7,2

colour temperature 3.000K (light colour 730)

54100 0013	541 0801 G2 730	9	1.310	146	7,1
54100 0014	541 0802 G2 730	13	1.820	140	7,1
54100 0015	541 0803 G2 730	18	2.460	137	7,1
54100 0016	541 1601 G2 730	17	2.600	153	7,2
54100 0017	541 1602 G2 730	25	3.610	144	7,2
54100 0018	541 1603 G2 730	35	4.830	138	7,2

symmetrical circular beam

colour temperature 4.000K (light colour 740)

54100 0007	541 0801R G2	9	1.380	153	7,1
54100 0008	541 0802R G2	13	1.920	148	7,1
54100 0009	541 0803R G2	18	2.590	144	7,1
54100 0010	541 1601R G2	17	2.740	161	7,2
54100 0011	541 1602R G2	25	3.800	152	7,2
54100 0012	541 1603R G2	35	5.080	145	7,2

colour temperature 3.000K (light colour 730)

54100 0013	541 0801R G2 730	9	1.310	146	7,1
54100 0014	541 0802R G2 730	13	1.820	140	7,1
54100 0015	541 0803R G2 730	18	2.460	137	7,1
54100 0016	541 1601R G2 730	17	2.600	153	7,2
54100 0017	541 1602R G2 730	25	3.610	144	7,2
54100 0018	541 1603R G2 730	35	4.830	138	7,2



with ring mirror



with frosted board cover



with frosted board cover and ring mirror

! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Accessories / Spare Parts

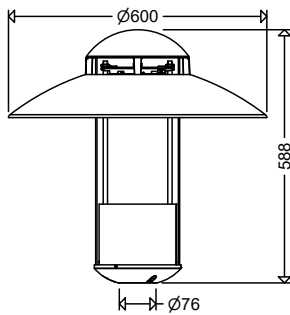
Article no.	Type	
10051 9000	ABD 541/55.	cover, cylinder PMMA clear, for 541, 553, 556, 557, 558...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 541 08..
90113 0017	HA 16/L50 VS	backside light shielding for 541 16..
90113 0008	HA 08/L25 LE	backside light shielding for 541 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 541 16.. R
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90126 0001	RZ 1 RAL9005	adapter for mast top Ø 60mm

NEW

CAPA

LED Pole-Top Light Fitting Light Fitting with variable setting of the luminous flux

Series 541... G2 VARIO



Applications:

541... G2:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

541... R G2:

Promenades, public parks, pedestrian areas etc.

Design:

Supporting section, roof and top cover:

Aluminium, powder-coated DB 702 (mica-iron paint, grey).

Cover: PMMA, clear, cylindrical

Electrical components: Wired ready for

installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Switch for setting the luminous flux of the luminaire.

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight pole end Ø of 76mm. Adapter (RZ 1) for pole end Ø of 60mm (see accessories / spare parts).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

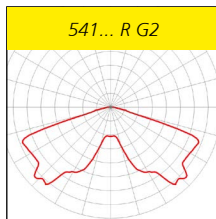
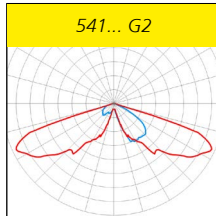
On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.



Options:

- 2,200K, light colour 722

(approx. 15% lower luminous flux)

- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)

- protection class I (SKI)

- optics for cycle track (RWX)

- for connection to group or central bat-

tery systems (ZB) or emergency lighting networks respectively

- seawater-resistant version (SWP)

- Ready for Light Management Systems (RFL), only possible without accessory ring mirror

- special painting in RAL colours (SL)



Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping. Any failure of a particular single LED will not create any dark zones in the road. The uniformity of the illumination is kept
- quick installation, maintenance and conversion thanks to tool-free opening of the light fitting and tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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541... G2 VARIO



The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

asymmetrical wide beam

colour temperature 3.000K (light colour 730)

54101 0001	541 L25 G2 VARIO	5 - 18	630 - 2.590	153	HST 35 - HST 50	7,1
54101 0002	541 L50 G2 VARIO	9 - 35	1.270 - 5.080	162	HST 35 - 2 x HST 70	7,2

colour temperature 3.000K (light colour 730)

54101 0003	541 L25 G2 VARIO 730	5 - 18	600 - 2.460	146	HST 35 - HST 50	7,1
54101 0004	541 L50 G2 VARIO 730	9 - 35	1.210 - 4.830	154	HST 35 - 2 x HST 70	7,2

symmetrical circular beam

colour temperature 4.000K (light colour 740)

54101 0005	541 L25R G2 VARIO	5 - 18	630 - 2.590	153	HST 35 - HST 50	7,1
54101 0006	541 L50R G2 VARIO	9 - 35	1.270 - 5.080	162	HST 35 - 2 x HST 70	7,2

colour temperature 3.000K (light colour 730)

54101 0007	541 L25R G2 VARIO 730	5 - 18	600 - 2.460	146	HST 35 - HST 50	7,1
54101 0008	541 L50R G2 VARIO 730	9 - 35	1.210 - 4.830	154	HST 35 - 2 x HST 70	7,2

Factory setting L25: 18 W; replaces approx. HME 80, HST 50

Factory setting L50: 18 W; replaces approx. HME 125, HST 70

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



with ring mirror



with frosted board cover



with frosted board cover and ring mirror

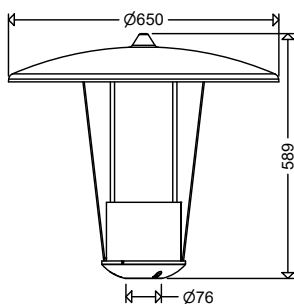


Accessories / Spare Parts

Article no.	Type	
10051 9000	ABD 541/55.	cover, cylinder PMMA clear, for 541, 553, 556, 557, 558...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 541 08..
90113 0017	HA 16/L50 VS	backside light shielding for 541 16..
90113 0008	HA 08/L25 LE	backside light shielding for 541 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 541 16.. R
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90126 0001	RZ 1 RAL9005	adapter for mast top Ø 60mm

NEW

RETRO LED Pole-Top Light Fitting Series 543... G2



Applications:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

Design :

Roof: Glass fibre reinforced polyester resin with integrated insert nut (colour: similar to RAL 7035).

Supporting section: Aluminium powder coated light grey (RAL 7035).

Cover: PMMA, clear, conical

Electrical components: Wired ready for

installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000$ h, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

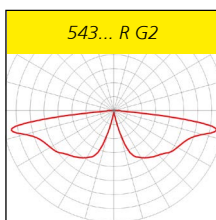
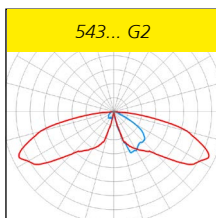
On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.



Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- optics for cycle track (RWX)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- seawater-resistant version (SWP)
- Ready for Light Management Systems (RFL), only possible without accessory ring mirror
- aluminium roof, standard colour RAL 7035 (series 543 AL...)
- special painting in RAL colours (SL)

Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping
- quick installation, maintenance and conversion thanks to tool-free opening of the light fitting and tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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IP54  Wind load area A = 0,15m²

543... G2

asymmetrical wide beam

colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

54300 0001	543 0801 G2	9	1.430	159	7,0
54300 0002	543 0802 G2	13	2.000	154	7,0
54300 0003	543 0803 G2	18	2.690	149	7,0
54300 0004	543 1601 G2	17	2.850	168	7,1
54300 0005	543 1602 G2	25	3.950	158	7,1
54300 0006	543 1603 G2	35	5.280	151	7,1

colour temperature 3.000K (light colour 730)

54300 0013	543 0801 G2 730	9	1.360	151	7,0
54300 0014	543 0802 G2 730	13	1.900	146	7,0
54300 0015	543 0803 G2 730	18	2.560	142	7,0
54300 0016	543 1601 G2 730	17	2.710	159	7,1
54300 0017	543 1602 G2 730	25	3.750	150	7,1
54300 0018	543 1603 G2 730	35	5.020	143	7,1

symmetrical circular beam

colour temperature 4.000K (light colour 740)

54300 0007	543 0801R G2	9	1.430	159	7,0
54300 0008	543 0802R G2	13	2.000	154	7,0
54300 0009	543 0803R G2	18	2.690	149	7,0
54300 0010	543 1601R G2	17	2.850	168	7,1
54300 0011	543 1602R G2	25	3.950	158	7,1
54300 0012	543 1603R G2	35	5.280	151	7,1

colour temperature 3.000K (light colour 730)

54300 0019	543 0801R G2 730	9	1.360	151	7,0
54300 0020	543 0802R G2 730	13	1.900	146	7,0
54300 0021	543 0803R G2 730	18	2.560	142	7,0
54300 0022	543 1601R G2 730	17	2.710	159	7,1
54300 0023	543 1602R G2 730	25	3.750	150	7,1
54300 0024	543 1603R G2 730	35	5.020	143	7,1



with ring mirror



with frosted board cover



with frosted board cover and ring mirror

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

Accessories / Spare Parts

Article no.	Type	
10043 9000	ABD 543	cover, conus PMMA clear, for 543...
10041 9001	ABDP 54../55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 543 08..
90113 0017	HA 16/L50 VS	backside light shielding for 543 16..
90113 0008	HA 08/L25 LE	backside light shielding for 543 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 543 16.. R
90128 9001	DACH 542/43 POL M10	spare roof, polyester, for light fittings with integrated cover nut
90127 9000	DACH 542/43 AL	spare roof, aluminium, for light fittings with separate cover nut
90116 9004	RS 54../55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90044 0001	RZ 1 RAL7035	adapter for mast top Ø 60mm

NEW

RETRO LED Pole-Top Light Fitting with variable setting of the luminous flux Series 543... G2 VARIO



**BLACK
EDITION**



Applications:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

Design :

Roof: Glass fibre reinforced polyester resin with integrated insert nut (colour: similar to RAL 7035).

Supporting section: Aluminium powder coated light grey (RAL 7035).

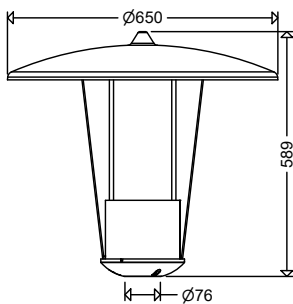
Cover: PMMA, clear, conical

Electrical components: Wired ready for installation, disconnect plug-in connector

to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).
Switch for setting the luminous flux of the luminaire.

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).



Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

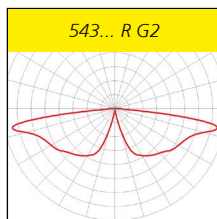
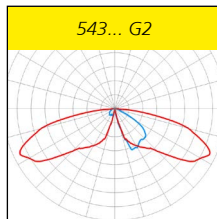
On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.



Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“
(approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– for connection to group or central battery systems (ZB) or emergency lighting networks respectively

– seawater-resistant version (SWP)

– Ready for Light Management Systems (RFL), only possible without accessory ring mirror

– aluminium roof, standard colour RAL 7035 (series 543 AL...)

– special painting in RAL colours (SL)



Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping
- quick installation, maintenance and conversion thanks to tool-free opening of the light fitting and tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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543... G2 VARIO



The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

asymmetrical wide beam

colour temperature 3.000K (light colour 730)

54301 0004	543 L25 G2 VARIO	5 - 18	660 - 2.690	144	HST 35 - HST 50	7,0
54301 0005	543 L50 G2 VARIO	9 - 35	1.320 - 5.280	156	HST 35 - 2 x HST 70	7,1

colour temperature 3.000K (light colour 730)

54301 0006	543 L25 G2 VARIO 730	5 - 18	630 - 2.560	136	HST 35 - HST 50	7,0
54301 0003	543 L50 G2 VARIO 730	9 - 35	1.250 - 5.020	147	HST 35 - 2 x HST 70	7,1

symmetrical circular beam

colour temperature 4.000K (light colour 740)

54301 0007	543 L25R G2 VARIO	5 - 18	660 - 2.690	144	HST 35 - HST 50	7,0
54301 0008	543 L50R G2 VARIO	9 - 35	1.320 - 5.280	156	HST 35 - 2 x HST 70	7,1

colour temperature 3.000K (light colour 730)

54301 0009	543 L25R G2 VARIO 730	5 - 18	630 - 2.560	136	HST 35 - HST 50	7,0
54301 0001	543 L50R G2 VARIO 730	9 - 35	1.250 - 5.020	147	HST 35 - 2 x HST 70	7,1

Factory setting L25: 18 W; replaces approx. HME 80, HST 50

Factory setting L50: 18 W; replaces approx. HME 125, HST 70

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



with ring mirror



with frosted board cover



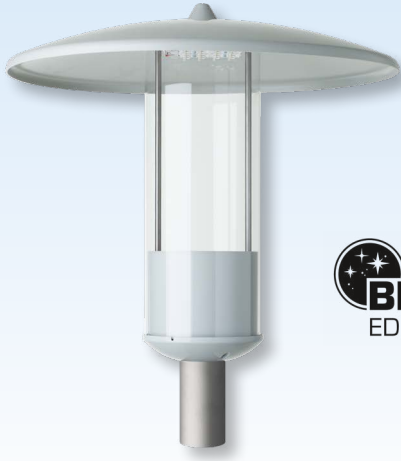
with frosted board cover and ring mirror

Accessories / Spare Parts

Article no.	Type	
10043 9000	ABD 543	cover, conus PMMA clear, for 543...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 543 08..
90113 0017	HA 16/L50 VS	backside light shielding for 543 16..
90113 0008	HA 08/L25 LE	backside light shielding for 543 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 543 16.. R
90128 9001	DACH 542/43 POL M10	spare roof, polyester, for light fittings with integrated cover nut
90127 9000	DACH 542/43 AL	spare roof, aluminium, for light fittings with separate cover nut
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90044 0001	RZ 1 RAL7035	adapter for mast top Ø 60mm

NEW

RETRO Z LED Pole-Top Light Fitting Series 553... G2



Applications:

553...:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

553... R:

Promenades, public parks, pedestrian areas etc.

Design :

Roof: Glass fibre reinforced polyester resin with integrated insert nut (colour: similar to RAL 7035).

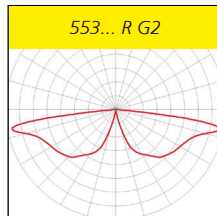
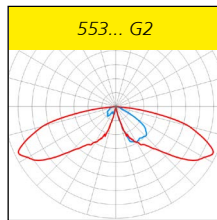
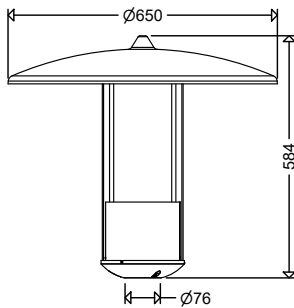
Supporting section: Aluminium powder coated light grey (RAL 7035).

Cover: PMMA, clear, cylindrical.

Electrical components: Wired ready for installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).



Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– for connection to group or central battery systems (ZB) or emergency lighting networks respectively

– seawater-resistant version (SWP)

– Ready for Light Management Systems (RFL), only possible without accessory ring mirror

– aluminium roof, standard colour RAL 7035 (series 553 AL...)

colours (SL)

Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping. Any failure of a particular single LED will not create any dark zones in the road. The uniformity of the illumination is kept
- quick installation, maintenance and conversion thanks to tool-free opening of the light fitting and tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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553... G2

IP54

Wind load area
A = 0,13m²

asymmetrical wide beam

colour temperature 4.000K (light colour 740)

55300 0001	553 0801 G2	9	1.430	144	7,0
55300 0002	553 0802 G2	13	2.000	135	7,0
55300 0003	553 0803 G2	18	2.690	132	7,0
55300 0004	553 1601 G2	17	2.850	156	7,1
55300 0005	553 1602 G2	25	3.950	142	7,1
55300 0006	553 1603 G2	35	5.280	135	7,1

colour temperature 3.000K (light colour 730)

55300 0013	553 0801 G2 730	9	1.360	136	7,0
55300 0014	553 0802 G2 730	13	1.900	127	7,0
55300 0015	553 0803 G2 730	18	2.560	124	7,0
55300 0016	553 1601 G2 730	17	2.710	148	7,1
55300 0017	553 1602 G2 730	25	3.750	134	7,1
55300 0018	553 1603 G2 730	35	5.020	127	7,1

symmetrical circular beam

colour temperature 4.000K (light colour 740)

55300 0007	553 0801R G2	9	1.430	144	7,0
55300 0008	553 0802R G2	13	2.000	135	7,0
55300 0009	553 0803R G2	18	2.690	132	7,0
55300 0010	553 1601R G2	17	2.850	156	7,1
55300 0011	553 1602R G2	25	3.950	142	7,1
55300 0012	553 1603R G2	35	5.280	135	7,1

colour temperature 3.000K (light colour 730)

55300 0019	553 0801R G2 730	9	1.360	136	7,0
55300 0020	553 0802R G2 730	13	1.900	127	7,0
55300 0021	553 0803R G2 730	18	2.560	124	7,0
55300 0022	553 1601R G2 730	17	2.710	148	7,1
55300 0023	553 1602R G2 730	25	3.750	134	7,1
55300 0024	553 1603R G2 730	35	5.020	127	7,1



with ring mirror



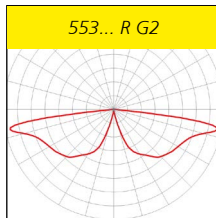
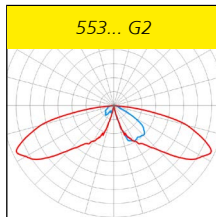
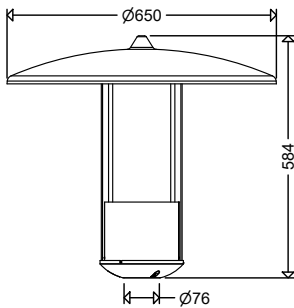
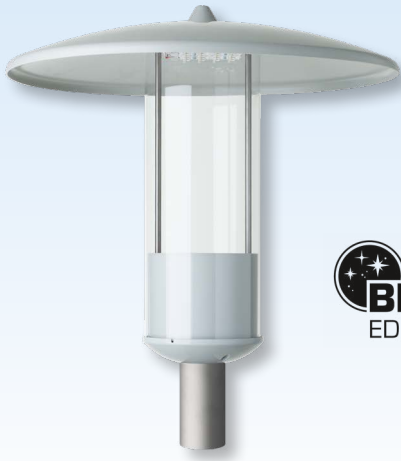
with frosted board cover

with frosted board cover
and ring mirror

! Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

Accessories / Spare Parts

Article no.	Type	
10051 9000	ABD 541/55.	cover, cylinder PMMA clear, for 541, 553, 556, 557, 558...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 553 08..
90113 0017	HA 16/L50 VS	backside light shielding for 553 16..
90113 0008	HA 08/L25 LE	backside light shielding for 553 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 553 16.. R
90128 9001	DACH 542/43 POL M10	spare roof, polyester, for light fittings with integrated cover nut
90127 9000	DACH 542/43 AL	spare roof, aluminium, with separate cover nut
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90044 0001	RZ 1 RAL7035	adapter for mast top Ø 60mm

NEW**RETRO Z****LED Pole-Top Light Fitting with variable setting of the luminous flux****Series 553... G2 VARIO****Applications:**

553...:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

553... R:

Promenades, public parks, pedestrian areas etc.

Design :**Roof:** Glass fibre reinforced polyester resin with integrated insert nut (colour: similar to RAL 7035).**Supporting section:** Aluminium powder coated light grey (RAL 7035).**Cover:** PMMA, clear, cylindrical.**Electrical components:** Wired ready for installation, disconnect plug-in connector to the mains connection terminal, cable retainer for connection cable, with LED module and ECG unit.**Light distribution:** Asymmetrical wide beam or symmetrical circular beam (R). **Switch** for setting the luminous flux of the luminaire.**Mounting system:** 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. Adapter (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).**Electrical design:****LED module:** 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant**ECG:** 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.**Light control:**

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.**Output reduction without control phase (LA):** Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming steps.**Digital dimming with DALI interface (DIMD)****Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire service life of the LED-modules.**Options:**

– 2,200K, light colour 722

(approx. 15% lower luminous flux)

– 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

– protection class I (SKI)

– optics for cycle track (RWX)

– for connection to group or central battery systems (ZB) or emergency lighting networks respectively

– seawater-resistant version (SWP)

– Ready for Light Management Systems (RFL), only possible without accessory ring mirror

– aluminium roof, standard colour RAL 7035 (series 553 AL...)

– special painting in RAL colours (SL)

Product highlights:

- optimal light distribution due to direct beam LED with highly efficient optics
- homogeneous illumination due to Multi-Layer technology i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping. Any failure of a particular single LED will not create any dark zones in the road. The uniformity of the illumination is kept
- quick installation, maintenance and conversion thanks to tool-free opening of the light fitting and tool-free replacement of the electrical components (LED module and ECG unit)
- BlackEdition, ULOR=0% (Modifications with accessories influence the light distribution)
- eco-friendly, all versions dimmable to 10% with luminous fluxes up to 2000lm and color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and long-term availability of spare parts

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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553... G2 VARIO

IP54



Wind load area
A = 0,13m²

The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

asymmetrical wide beam

colour temperature 3.000K (light colour 730)

55301 0001	553 L25 G2 VARIO	5 - 18	660 - 2.690	144	HST 35 - HST 50	7,0
55301 0002	553 L50 G2 VARIO	9 - 35	1.320 - 5.280	156	HST 35 - 2 x HST 70	7,1

colour temperature 3.000K (light colour 730)

55301 0003	553 L25 G2 VARIO 730	5 - 18	630 - 2.560	136	HST 35 - HST 50	7,0
55301 0004	553 L50 G2 VARIO 730	9 - 35	1.250 - 5.020	147	HST 35 - 2 x HST 70	7,1

symmetrical circular beam

colour temperature 4.000K (light colour 740)

55301 0005	553 L25R G2 VARIO	5 - 18	660 - 2.690	144	HST 35 - HST 50	7,0
55301 0006	553 L50R G2 VARIO	9 - 35	1.320 - 5.280	156	HST 35 - 2 x HST 70	7,1

colour temperature 3.000K (light colour 730)

55301 0007	553 L25R G2 VARIO 730	5 - 18	630 - 2.560	136	HST 35 - HST 50	7,0
55301 0008	553 L50R G2 VARIO 730	9 - 35	1.250 - 5.020	147	HST 35 - 2 x HST 70	7,1

Factory setting L25: 18 W; replaces approx. HME 80, HST 50

Factory setting L50: 18 W; replaces approx. HME 125, HST 70

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



with ring mirror



with frosted board cover



with frosted board cover and ring mirror

Accessories / Spare Parts

Article no.	Type	
10051 9000	ABD 541/55.	cover, cylinder PMMA clear, for 541, 553, 556, 557, 558...
10041 9001	ABDP 54./55. C	board cover, diffuser for glare limitation, diffuser PMMA satined, for 541, 543, 553, 556, 557, 558...
90113 0016	HA 08/L25 VS	backside light shielding for 553 08..
90113 0017	HA 16/L50 VS	backside light shielding for 553 16..
90113 0008	HA 08/L25 LE	backside light shielding for 553 08.. R
90113 0009	HA 16/L50 LE	backside light shielding for 553 16.. R
90128 9001	DACH 542/43 POL M10	spare roof, polyester, for light fittings with integrated cover nut
90127 9000	DACH 542/43 AL	spare roof, aluminium, with separate cover nut
90116 9004	RS 54./55. G2	ring mirror, aluminium for series 541, 543, 553, 556, 557, 558... (Design element)
90044 0001	RZ 1 RAL7035	adapter for mast top Ø 60mm

NEW

BELLA Pendant LED Light Fittings Series 564/565... G2



Applications:

Renewal of villages and historic city centres, low traffic areas, pedestrian areas, promenades, public parks.

Design:

Housing: Aluminium sheet, powder coated in DB 702 (mica-iron paint, grey).
Cover: Diffuser PMMA pearled

Electro kit: ECG and LED wired ready for connection, cable retainer for connection cable in housing.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Mounting: To pole top sections with internal thread 3/4" (see accessories / spare parts).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

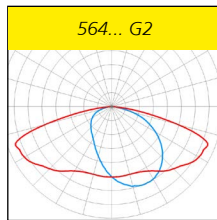
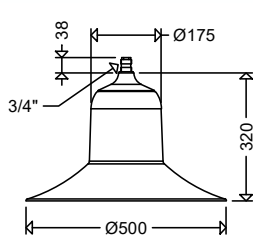
Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

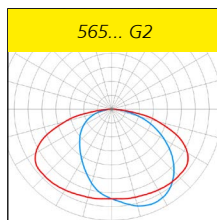
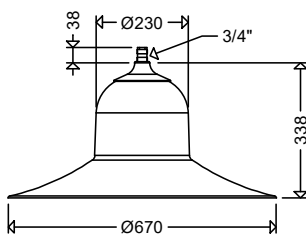
Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Series 564... G2



Series 565... G2



Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- optics for cycle track (RWX)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- seawater-resistant version (SWP)
- special painting in RAL colours (SL)

Product highlights:

- optimal light distribution due to highly efficient lens optics with direct beam
- good glare limitation due to low-lying pearled cover
- homogeneous illumination due to Multi-Layer technology, i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping.
- quick maintenance and change of components due to tool-free exchangeable gear-tray system (electrical block)
- eco-friendly, no light emission into the upper half space, ULOR=0
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.



Outdoor
Light Fittings

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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564... G2



All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

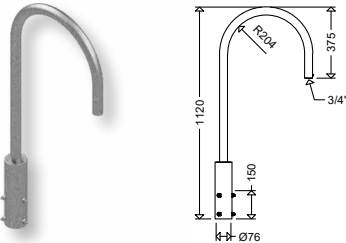
colour temperature 4.000K (light colour 740)

56400 0001	564 0801 G2	9	1.410	157	2,8
56400 0002	564 0802 G2	13	1.910	147	2,8
56400 0003	564 0803 G2	18	2.580	143	2,8
56400 0007	564 0801R G2	9	1.410	157	2,8
56400 0008	564 0802R G2	13	1.910	147	2,8
56400 0009	564 0803R G2	18	2.580	143	2,8
56400 0004	564 1601 G2	17	2.860	168	2,8
56400 0005	564 1602 G2	25	3.840	154	2,8
56400 0006	564 1603 G2	35	5.150	147	2,8
56400 0010	564 1601R G2	17	2.860	168	2,8
56400 0011	564 1602R G2	25	3.840	154	2,8
56400 0012	564 1603R G2	35	5.150	147	2,8

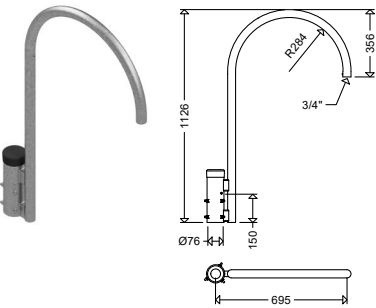
colour temperature 3.000K (light colour 730)

56400 0013	564 0801 G2 730	9	1.330	148	2,8
56400 0014	564 0802 G2 730	13	1.800	138	2,8
56400 0015	564 0803 G2 730	18	2.430	135	2,8
56400 0019	564 0801R G2 730	9	1.330	148	2,8
56400 0020	564 0802R G2 730	13	1.800	138	2,8
56400 0021	564 0803R G2 730	18	2.430	135	2,8
56400 0016	564 1601 G2 730	17	2.690	158	2,8
56400 0017	564 1602 G2 730	25	3.610	144	2,8
56400 0018	564 1603 G2 730	35	4.840	138	2,8
56400 0022	564 1601R G2 730	17	2.690	158	2,8
56400 0023	564 1602R G2 730	25	3.610	144	2,8
56400 0024	564 1603R G2 730	35	4.840	138	2,8

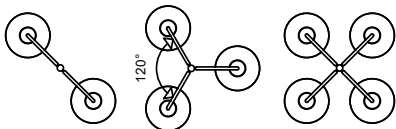
Round arch pole-top adapter for pendant lights with upper thread 3/4"



Article no.	Type	Description	Weight
61999 0001	619/1	for 1 fitting	8,8 kg



72299 0001	722/1	for 1 fitting	8,2 kg
72299 0002	722/2	for 2 fitting	14,0 kg
72299 0003	722/3	for 3 fittings	19,9 kg
72299 0004	722/4	for 4 fittings	25,7 kg



Tops also available painted to match luminaire color (SL).

565... G2



colour temperature 4.000K (light colour 740)

56500 0001	565 1601 G2	17	2.860	168	4,4
56500 0002	565 1602 G2	25	3.840	154	4,4
56500 0003	565 1603 G2	35	5.150	147	4,4
56500 0007	565 1601R G2	17	2.860	168	4,4
56500 0008	565 1602R G2	25	3.840	154	4,4
56500 0009	565 1603R G2	35	5.150	147	4,4
56500 0004	565 3201 G2	34	5.620	165	4,5
56500 0005	565 3202 G2	50	7.610	152	4,5
56500 0006	565 3203 G2	70	10.250	146	4,5
56500 0010	565 3201R G2	34	5.620	165	4,5
56500 0011	565 3202R G2	50	7.610	152	4,5
56500 0012	565 3203R G2	70	10.250	146	4,5

colour temperature 3.000K (light colour 730)

56500 0013	565 1601 G2 730	17	2.690	158	4,4
56500 0014	565 1602 G2 730	25	3.610	144	4,4
56500 0015	565 1603 G2 730	35	4.840	138	4,4
56500 0019	565 1601R G2 730	17	2.690	158	4,4
56500 0020	565 1602R G2 730	25	3.610	144	4,4
56500 0021	565 1603R G2 730	35	4.840	138	4,4
56500 0016	565 3201 G2 730	34	5.290	156	4,5
56500 0017	565 3202 G2 730	50	7.150	143	4,5
56500 0018	565 3203 G2 730	70	9.640	138	4,5
56500 0022	565 3201R G2 730	34	5.290	156	4,5
56500 0023	565 3202R G2 730	50	7.150	143	4,5
56500 0024	565 3203R G2 730	70	9.640	138	4,5

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

Accessories / Spare Parts

Article no.	Type	
56410 0001	ABD 564 G2 P	cover, diffuser PMMA pearled, for 564... G2
56510 0001	ABD 565 G2 P	cover, diffuser PMMA pearled, for 565... G2
90113 0016	HA 08/L25 VS	backside light shielding for 564/565 08.. G2
90113 0017	HA 16/L50 VS	backside light shielding for 564/565 16.. G2
90113 0019	HA 32/L80/L100 VS	backside light shielding for 564/565 32.. G2

NEW**BELLA****Pendant LED Light Fittings with variable setting of the luminous flux****Series 564/565... G2 VARIO****Applications:**

Renewal of villages and historic city centres, low traffic areas, pedestrian areas, promenades, public parks.

Design:

Housing: Aluminium sheet, powder coated in DB 702 (mica-iron paint, grey).

Cover: Diffuser PMMA pearled

Electro kit: ECG and LED wired ready for

connection, cable retainer for connection cable in housing.

Light distribution: Asymmetrical wide beam or symmetrical circular beam (R).

Switch for setting the luminous flux of the luminaire.

Mounting: To pole top sections with internal thread 3/4" (see accessories / spare parts).

**Electrical design:**

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

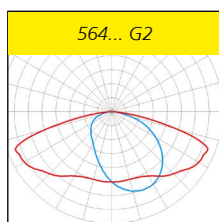
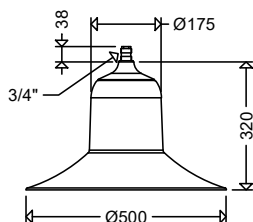
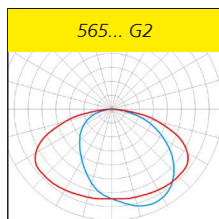
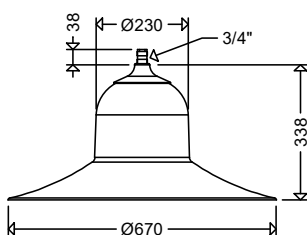
Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class I (SKI)
- optics for cycle track (RWX)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- seawater-resistant version (SWP)
- special painting in RAL colours (SL)

Series 564... G2**Series 565... G2****Product highlights:**

- optimal light distribution due to highly efficient lens optics with direct beam
- good glare limitation due to low-lying pearled cover
- homogeneous illumination due to Multi-Layer technology, i.e. every individual LED illuminates the total area, the light curves of the individual LEDs are overlapping.
- quick maintenance and change of components due to tool-free exchangeable gear-tray system (electrical block)
- eco-friendly, no light emission into the upper half space, $ULOR=0$
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.



Article No.	Type	Connected load [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [kg] (without packing material)
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564... G2 VARIO

IP54

Wind load area A = 0,09m²

The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

colour temperature 4.000K (light colour 740)

56401 0001	564 L25 G2 VARIO	5 - 18	600 - 2.580	157	HST 35 - HST 50	2,8
56401 0003	564 L25R G2 VARIO	5 - 18	600 - 2.580	157	HST 35 - HST 50	2,8
56401 0002	564 L50 G2 VARIO	9 - 35	1.210 - 5.150	165	HST 35 - 2 x HST 70	2,8
56401 0004	564 L50R G2 VARIO	9 - 35	1.210 - 5.150	165	HST 35 - 2 x HST 70	2,8

colour temperature 3.000K (light colour 730)

56401 0005	564 L25 G2 VARIO 730	5 - 18	570 - 2.430	148	HST 35 - HST 50	2,8
56401 0007	564 L25R G2 VARIO 730	5 - 18	570 - 2.430	148	HST 35 - HST 50	2,8
56401 0006	564 L50 G2 VARIO 730	9 - 35	1.140 - 4.840	155	HST 35 - 2 x HST 70	2,8
56401 0008	564 L50R G2 VARIO 730	9 - 35	1.140 - 4.840	155	HST 35 - 2 x HST 70	2,8

IP54

Wind load area A = 0,12m²

565... VARIO G2

colour temperature 4.000K (light colour 740)

56501 0001	565 L50 G2 VARIO	9 - 35	1.210 - 5.150	165	HST 35 - 2 x HST 70	4,4
56501 0003	565 L50R G2 VARIO	9 - 35	1.210 - 5.150	165	HST 35 - 2 x HST 70	4,4
56501 0002	565 L100 G2 VARIO	16 - 70	2.410 - 10.300	165	HST 50 - HSE 150	4,5
56501 0004	565 L100R G2 VARIO	16 - 70	2.410 - 10.300	165	HST 50 - HSE 150	4,5

colour temperature 3.000K (light colour 730)

56501 0005	565 L50 G2 VARIO 730	9 - 35	1.140 - 4.840	155	HST 35 - 2 x HST 70	4,4
56501 0007	565 L50R G2 VARIO 730	9 - 35	1.140 - 4.840	155	HST 35 - 2 x HST 70	4,4
56501 0006	565 L100 G2 VARIO 730	16 - 70	2.270 - 9.680	156	HST 50 - HSE 150	4,5
56501 0008	565 L100R G2 VARIO 730	16 - 70	2.270 - 9.680	156	HST 50 - HSE 150	4,5

Factory setting L25: 18 W; replaces approx. HST 50

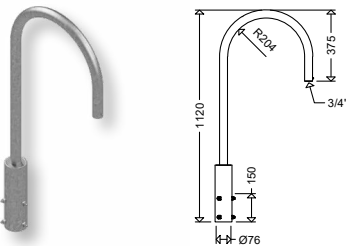
Factory setting L100: 54 W; replaces approx. HME 250

Factory setting L50: 18 W; replaces approx. HME 125, HST 70

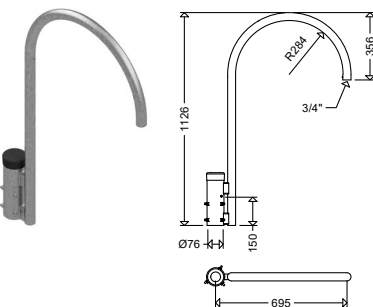
* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

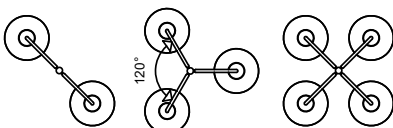
Round arch pole-top adapter for pendant lights with upper thread 3/4"



Article no.	Type	Description	Weight
61999 0001	619/1	for 1 fitting	8,8 kg



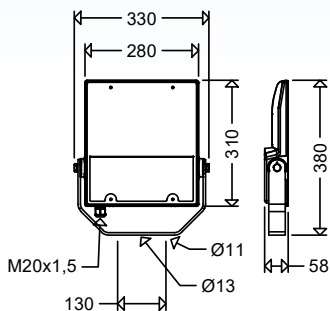
72299 0001	722/1	for 1 fitting	8,2 kg
72299 0002	722/2	for 2 fitting	14,0 kg
72299 0003	722/3	for 3 fittings	19,9 kg
72299 0004	722/4	for 4 fittings	25,7 kg



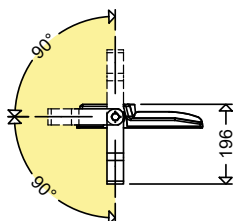
Tops also available painted to match luminaire color (SL).

Accessories / Spare Parts

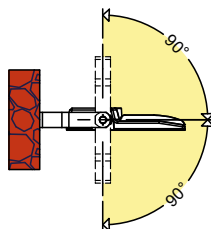
Article no.	Type	
56410 0001	ABD 564 G2 P	cover, diffuser PMMA pearled, for 564... G2
56510 0001	ABD 565 G2 P	cover, diffuser PMMA pearled, for 565... G2
90113 0016	HA 08/L25 VS	backside light shielding for 564/565 08.. G2
90113 0017	HA 16/L50 VS	backside light shielding for 564/565 16.. G2
90113 0019	HA 32/L80/L100 VS	backside light shielding for 564/565 32.. G2



Swivel range



Standard Mounting



FOCO LED Floodlight / Plane Surface Floodlight with variable setting of the luminous flux Series 7600... VARIO

Applications:

Industrial areas, stockyards, terminals, object protection and fence illumination, construction zone, accent lighting, illumination of building and facades etc.

Design:

Housing: Die-cast aluminium, 1-part, powder coated DB 702 (mica-iron paint, grey) with LED-Module, optics (versions TB, T and A), electronic ballast and pressure compensation system.

Glass: Flat safety glass pane, resistant to temperature changes, impact resistant IK09, silicone gasket.

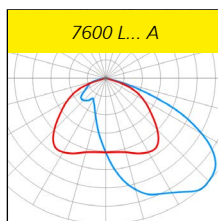
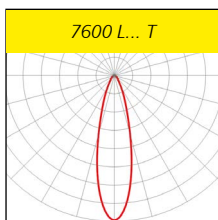
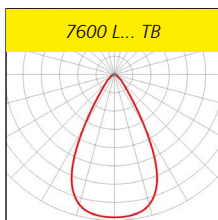
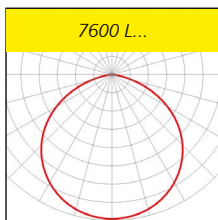
Switch for setting the luminous flux in the terminal compartment, accessible from the outside.

Light distribution: With optics narrow-wide (TB), narrow (T) or asymmetrical beam (A), without optics wide beam.

Connection: Terminal compartment, accessible from the outside, 3-pole terminal, max. clamping range 2,5 mm².

Cable entry: 1 cable entry M20 x 1.5 (1 cable gland).

Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting.



Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -40°C up to +50°C

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class II (SKII)
- Optics asymmetrical wide beam (AB)
- low glare optics (ABL)
- Optics (TX) for extremely narrow beam
- high protection (HR) against corrosive atmospheres or harmful gases
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- extended swivel range (ESB)
- cable looping at 1 small side (RR)
- vibration-resistant design (RF)
- with variable setting of the luminous flux via app (VARIO NFC)
- special painting in RAL colours (SL)

Product highlights:

- two types replace several conventional lights and thus reduce the variety of types
- easy, quick, tool-free adjustment of the luminous flux on site via switch in the terminal compartment, accessible from the outside, can be changed afterwards
- high flexibility by nearly continuous adjustment of the luminous flux
- quick electrical connection due to outlaying electrical connection box
- ECG with high surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- optimal light distribution due to highly efficient lens optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- eco-friendly, no light emission into the upper half-space, ULOR=0 (Plane Surface Floodlight)
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Power/ consumption [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [ca. kg] (without packaging)
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7600 ... VARIO



Floodlight / Plane Surface Floodlight

The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

colour temperature 4.000K (light colour 740)

76000 0102	7600 L50 VARIO	9 - 35	1.370 - 5.660	177	HST 35 - 2 x HST 70	3,8
76000 0104	7600 L50TB VARIO					
76000 0106	7600 L50T VARIO					
76000 0100	7600 L50A VARIO					
76000 0103	7600 L100 VARIO	16 - 70	2.740 - 11.170	177	HST 50 - HSE 150	3,8
76000 0105	7600 L100TB VARIO					
76000 0107	7600 L100T VARIO					
76000 0101	7600 L100A VARIO					

colour temperature 3.000K (light colour 730)

76000 0156	7600 L50 VARIO 730	9 - 35	1.300 - 5.380	168	HST 35 - 2 x HST 70	3,9
76000 0176	7600 L50TB VARIO 730					
76000 0177	7600 L50T VARIO 730					
76000 0122	7600 L50A VARIO 730					
76000 0137	7600 L100 VARIO 730	16 - 70	2.600 - 10.610	168	HST 50 - HSE 150	3,9
76000 0178	7600 L100TB VARIO 730					
76000 0133	7600 L100T VARIO 730					
76000 0117	7600 L100A VARIO 730					

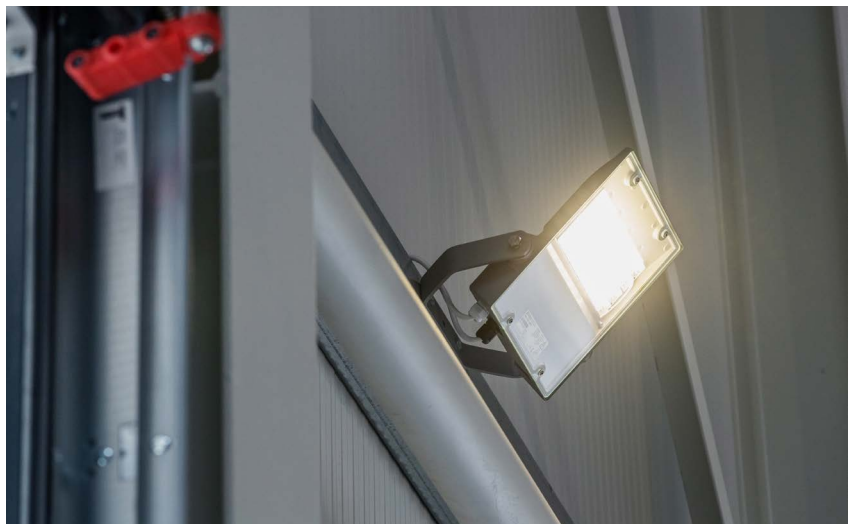
Factory setting L50: 18 W; replaces approx. ca. HME 125, HST 70

Factory setting L100: 54 W; replaces approx. HME 250

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



Accessories / Spare Parts

Article no.	Type	
76001 9000	ABD 7600	cover, pane safety glass clear, for 7600...
75739 9006	7600/1 M	pole top for single mounting; galvanised steel
75739 9007	7600/2 M	pole top for dual mounting; galvanised steel
75739 9009	7600/3 M	pole top for threefold mounting; galvanised steel
75739 9008	7600/4 M	pole top for fourfold mounting; galvanised steel
90120 9011	2530	plastic cable gland M20 x 1,5 black

All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.



FOCO LED Floodlight / Plane Surface Floodlight with variable setting of the luminous flux Ready for Light Management System Series 7600... VARIO RFL

Applications:

Industrial areas, stockyards, terminals, object protection and fence illumination, construction zone, accent lighting, illumination of building and facades etc.

Design:

The luminaires are prepared for the subsequent use of a light management system. An integrated socket allows retrofitting of light management components without tools.

Housing: Die-cast aluminium, 1-part, powder coated DB 702 (mica-iron paint, grey) with LED-Module, optics (versions TB, T), electronic ballast and pressure compensation system.

Zhaga compliant socket on the top side of the housing.

Glass: Flat safety glass pane, resistant to temperature changes, impact resistant IK09, silicone gasket.

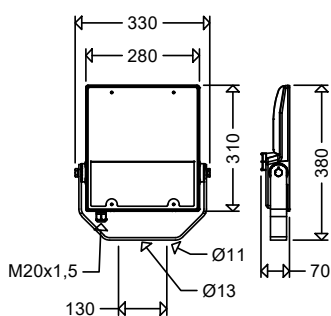
Switch for setting the luminous flux in the terminal compartment, accessible from the outside.

Light distribution: With optics narrow-wide (TB), narrow (T) or asymmetrical beam (A), without optics wide beam.

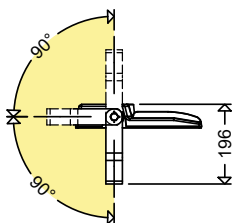
Connection: Terminal compartment, accessible from the outside, 3-pole terminal, max. clamping range 2,5 mm².

Cable entry: 1 cable entry M20 x 1.5 (1 cable gland).

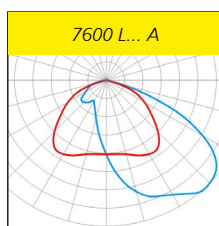
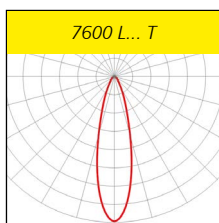
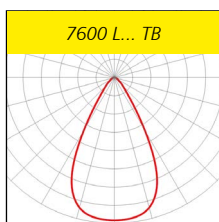
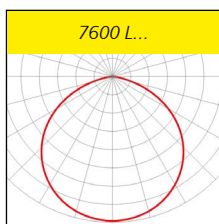
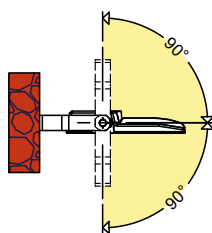
Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting.



Swivel range



Standard Mounting



Exclusively D4i control gear is being used in RFL luminaires from SCHUCH. All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from SCHUCH. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -40°C up to +50°C

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- protection class II (SKII)
- Optics asymmetrical wide beam (AB)
- low glare optics (ABL)
- Optics (TX) for extremely narrow beam
- high protection (HR) against corrosive atmospheres or harmful gases
- dimmable via DALI (DIMD)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- cable looping at 1 small side (RR)
- special painting in RAL colours (SL)

Product highlights:

- subsequent use of a lighting management system possible at any time
- tool-free, quick assembly of the light management system components
- standardized Zhaga compliant socket allows free choice of light management system
- ECG with surge voltage resistance 10kV
- optimized thermal management due to direct adaption of the LED-modules to the housing
- service life $L_{90} > 100,000h$
- homogeneous illumination due to the Multi-Layer-Technology
- easy, quick, tool-free adjustment of the luminous flux on site via switch in the terminal compartment, accessible from the outside, can be changed afterwards
- high flexibility by nearly continuous adjustment of the luminous flux
- optimal light distribution due to highly efficient lens optics
- eco-friendly, no light emission into the upper half-space, ULOR=0 (Plane Surface Floodlight)
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and Socket
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Power/ consumption [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [ca. kg] (without packaging)
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7600 ... VARIO RFLO



Floodlight / Plane Surface Floodlight with a socket on the top side of the luminaire

The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

colour temperature 4.000K (light colour 740)

76002 0002	7600 L50 VARIO RFLO	} 9 - 35	1.370 - 5.660	177	HST 35 - 2 x HST 70	3,8
76002 0003	7600 L50TB VARIO RFLO					
76002 0004	7600 L50T VARIO RFLO					
76002 0001	7600 L50A VARIO RFLO					

colour temperature 3.000K (light colour 730)

76002 0006	7600 L50 730 VARIO RFLO	} 9 - 35	1.300 - 5.380	168	HST 35 - 2 x HST 70	3,8
76002 0007	7600 L50TB 730 VARIO RFLO					
76002 0008	7600 L50T 730 VARIO RFLO					
76002 0009	7600 L50A 730 VARIO RFLO					

Factory setting L50: 18 W; replaces approx. ca. HME 125, HST 70

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.

RFL LIMAS HUB3 G2 / RFL LIMAS HUB3 G2 GPS SIM



RFL DS20 HUB 20lux ON/OFF



LIMAS USB-Dongle



System components

Article No.	Type	
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	radio control with GPS antenna and photocell (twilight control) with integrated SIM card
90546 9014	RFL LIMAS HUB3 G2	radio control with photocell (twilight control)
90546 9000	RFL DS20 HUB 20lux ON/OFF	twilight switch for autonomous control of RFLO luminaires

Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

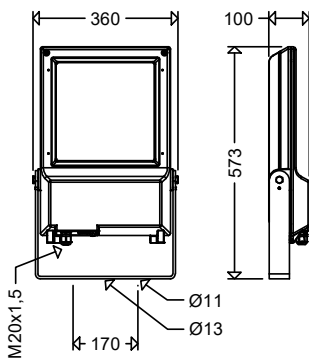
Control components

Article No.	Type	
90545 0001	LIMAS Dongle USB	enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	control element with photocell/ twilight switch, GPS antenna and SIM card

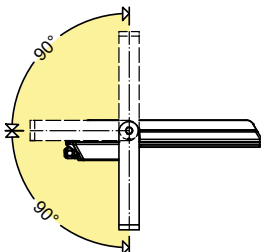
Accessories / Spare Parts

Article no.	Type	
76001 9000	ABD 7600	cover, pane safety glass clear, for 7600...
75739 9006	7600/1 M	pole top for single mounting; galvanised steel
75739 9007	7600/2 M	pole top for dual mounting; galvanised steel
75739 9009	7600/3 M	pole top for threefold mounting; galvanised steel
75739 9008	7600/4 M	pole top for fourfold mounting; galvanised steel
90120 9011	2530	plastic cable gland M20 x 1,5 black

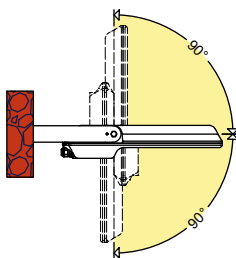
All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.



Swivel range



Standard Mounting



FOCO L LED Floodlight / Plane Surface Floodlight Series 7700...

Applications:

Industrial areas, stockyards, terminals, construction zone, accent lighting, illumination of building and facades etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated DB 702 (mica-iron paint, grey).

Upper part: With LED- and optics-modules

Lower part: With electronic ballast, glass cover, cable entry with cable relief and pressure compensation system, retractable.

Glass: Flat safety glass pane, resistant to

temperature changes, impact resistant IK10, silicone gasket.

Light distribution: With optics narrow-wide (TB), narrow (T) or asymmetrical beam (A), without optics wide beam.

Connection: 3-pole terminal, max. clamping range 2,5 mm².

Cable entry: 1 cable entry M20 x 1.5 (1 cable gland).

Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting or for direct pole mounting in conjunction with pipe clamps **ROB 60/76 G2** (see accessories).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -40°C up to +40°C

Options:

- 2,200K, **light colour 722** (approx. 15% lower luminous flux)
- 1,800K, **light colour 518 „Amber“** (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class II (SKII)
- asymmetrical wide beam (AB-optics)
- low glare optics (ABL)
- extremely narrow beam (TX)
- high protection (HR) against corrosive atmospheres or harmful gases
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- extended Swivel range (ESB)
- cable looping at 1 small side (RR)
- vibration-resistant design (RF)
- with variable setting of the luminous flux via app (VARIO NFC)
- special painting in RAL colours (SL)

Product highlights:

- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- optimal light distribution due to highly efficient optics
- homogeneous illumination due to the **Multi-Layer-Technology** i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components, ECG replaceable on-site
- eco-friendly, no light emission into the upper half-space, **ULOR=0 (Plane surface floodlight)**
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the **Dark Sky requirements**
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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7700 ...

Floodlight / Plane Surface Floodlight colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

77001 0001	7700 3203	70	11.360	162	9,5
77001 0003	7700 3203TB				
77001 0004	7700 3203T				
77001 0002	7700 3203A				
77001 0009	7700 4803	106	16.790	158	9,7
77001 0011	7700 4803TB				
77001 0012	7700 4803T				
77001 0010	7700 4803A				
77001 0017	7700 6403	140	21.940	157	9,7
77001 0019	7700 6403TB				
77001 0020	7700 6403T				
77001 0018	7700 6403A				

colour temperature 3.000K (light colour 730)

77001 0005	7700 3203 730	70	10.790	154	9,5
77001 0007	7700 3203TB 730				
77001 0008	7700 3203T 730				
77001 0006	7700 3203A 730				
77001 0013	7700 4803 730	106	15.950	150	9,7
77001 0015	7700 4803TB 730				
77001 0016	7700 4803T 730				
77001 0014	7700 4803A 730				
77001 0021	7700 6403 730	140	20.840	149	9,7
77001 0023	7700 6403TB 730				
77001 0024	7700 6403T 730				
77001 0022	7700 6403A 730				

Also available with output reduction (LR / LA) and constant luminous flux function (CL) or combinations of the functions (CL LR / CL LA)



Accessories / Spare Parts

Article no.	Type	
78001 9002	ABD 7700	cover, pane safety glas clear, for 7700...
75739 9010	7700/7800/1 M	pole top for single mounting; galvanised steel
75739 9011	7700/7800/2 M	pole top for dual mounting; galvanised steel
90270 0006	ROB 60/76 G2	pipe clamp for direct pole mounting or on multiple post top adapters; galvanised steel
90120 9011	2530	plastic cable gland M20 x 1,5 black
75350 0034	SD 7700 ST	vibration absorbing suspension device for series 7700, galvanised steel

All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.

NEW

FOCO L LED Floodlight / Plane Surface Floodlight with variable setting of the luminous flux Series 7700... VARIO



Applications:

Industrial areas, stockyards, terminals, construction zone, accent lighting, illumination of building and facades etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated DB 702 (mica-iron paint, grey).

Upper part: With LED- and optics-modules

Lower part: With electronic ballast, glass cover, cable entry with cable relief and pressure compensation system, retractable.

Glass: Flat safety glass pane, resistant to temperature changes, impact resistant

IK10, silicone gasket.

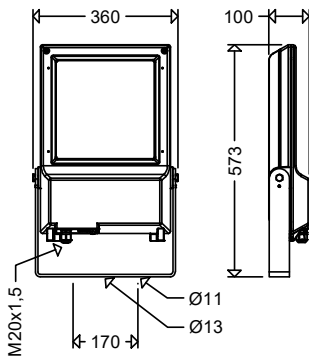
Switch for setting the luminous flux of the luminaire.

Light distribution: With optics narrow-wide (TB), narrow (T) or asymmetrical beam (A), without optics wide beam.

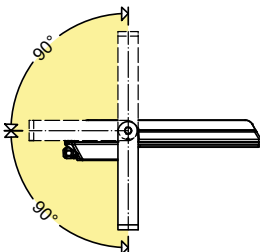
Connection: 3-pole terminal, max. clamping range 2,5 mm².

Cable entry: 1 cable entry M20 x 1.5 (1 cable gland).

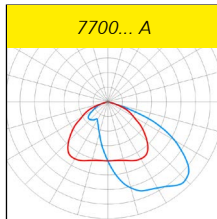
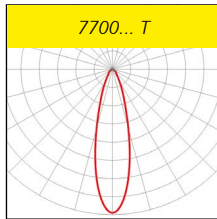
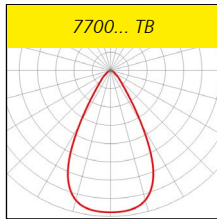
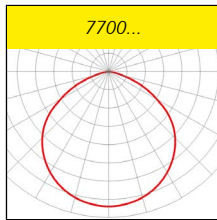
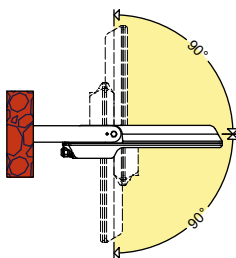
Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting or for direct pole mounting in conjunction with pipe clamps **ROB 60/76 G2** (see accessories).



Swivel range



Standard Mounting



Electrical design:

LED module: 4,000K or 3,000K, R_a > 70, service life L₉₀ > 100,000h, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -40°C up to +40°C

Options:

- 2,200K, light colour 722

- (approx. 15% lower luminous flux)

- 1,800K, light colour 518 „Amber“

- (approx. 45% lower luminous flux)

- adaptive Light EcoTune (ET)

- protection class II (SKII)

- asymmetrical wide beam (AB-optics)

- low glare optics (ABL)

- extremely narrow beam (TX)

- high protection (HR) against corrosive atmospheres or harmful gases

- seawater-resistant version (SWP)

- for connection to group or central battery systems (ZB) or emergency lighting networks respectively

- additional overvoltage protection (OP) in SKI

- inrush current limiter (ESSB)

- extended Swivel range (ESB)

- cable looping at 1 small side (RR)

- vibration-resistant design (RF)

- with variable setting of the luminous flux via app (VARIO NFC)

- special painting in RAL colours (SL)

Product highlights:

- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- optimal light distribution due to highly efficient optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components, ECG replaceable on-site
- eco-friendly, no light emission into the upper half-space, ULOR=0 (Plane Surface Floodlight)
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Power/ consumption [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [ca. kg] (without packaging)
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7700 ... VARIO

The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

Floodlight / Plane Surface Floodlight

colour temperature 4.000K (light colour 740)

77001 0001	7700 L100 VARIO	16 - 70	2.760 - 11.360	179	HST 50 - HSE 150	9,5
77001 0003	7700 L100TB VARIO					
77001 0004	7700 L100T VARIO					
77001 0002	7700 L100A VARIO					
77001 0009	7700 L150 VARIO	24 - 106	4.120 - 1.6790	173	2 x HME 80 - 2 x HME 250	9,7
77001 0011	7700 L150TB VARIO					
77001 0012	7700 L150T VARIO					
77001 0010	7700 L150A VARIO					
77001 0017	7700 L210 VARIO	32 - 140	5.400 - 21.940	169	2 x HST 70 - HME 400	9,7
77001 0019	7700 L210TB VARIO					
77001 0020	7700 L210T VARIO					
77001 0018	7700 L210A VARIO					

colour temperature 3.000K (light colour 730)

77001 0005	7700 L100 VARIO 730	16 - 70	2.620 - 10.790	171	HST 50 - HSE 150	9,5
77001 0007	7700 L100TB VARIO 730					
77001 0008	7700 L100T VARIO 730					
77001 0006	7700 L100A VARIO 730					
77001 0013	7700 L150 VARIO 730	24 - 106	3.910 - 15.950	164	2 x HME 80 - 2 x HME 250	9,7
77001 0015	7700 L150TB VARIO 730					
77001 0016	7700 L150T VARIO 730					
77001 0014	7700 L150A VARIO 730					
77001 0021	7700 L210 VARIO 730	32 - 140	5.130 - 20.840	160	2 x HST 70 - HME 400	9,7
77001 0023	7700 L210TB VARIO 730					
77001 0024	7700 L210T VARIO 730					
77001 0022	7700 L210A VARIO 730					

Factory setting L100: 54 W; replaces approx. ca. HME 25

Factory setting L150: 106 W; replaces approx. 2 x HME 250

Factory setting L210: 54 W; replaces approx. HME 400

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

! Also available with output reduction (LR / LA) and constant luminous flux function (CL) or combinations of the functions (CL LR / CL LA)



Accessories / Spare Parts

Article no.	Type	
78001 9002	ABD 7700	cover, pane safety glas clear, for 7700...
75739 9010	7700/7800/1 M	pole top for single mounting; galvanised steel
75739 9011	7700/7800/2 M	pole top for dual mounting; galvanised steel
90270 0006	ROB 60/76 G2	pipe clamp for direct pole mounting or on multiple post top adapters; galvanised steel
90120 9011	2530	plastic cable gland M20 x 1,5 black
75350 0034	SD 7700 ST	vibration absorbing suspension device for series 7700, galvanised steel

All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.



FOCO L LED Floodlight / Plane Surface Floodlight Ready for Light Management System Series 7700... RFL

Applications:

Industrial areas, stockyards, terminals, construction zone, accent lighting, illumination of building and facades etc.

Design:

The luminaires are prepared for the subsequent use of a light management system. Integrated sockets allow light management components to be retrofitted without tools.

Housing: Die-cast aluminium, 2-parts, powder coated DB 702 (mica-iron paint, grey).

Upper part: With LED- and optics-modules, **Lower part:** With electronic ballast, glass cover, cable entry with cable relief and pressure compensation system,

retractable.

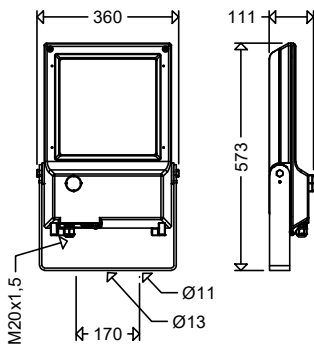
Glass: Flat safety glass pane, resistant to temperature changes, impact resistant IK10, silicone gasket.

Light distribution: With optics narrow-wide (TB), narrow (T) or asymmetrical beam (A), without optics wide beam.

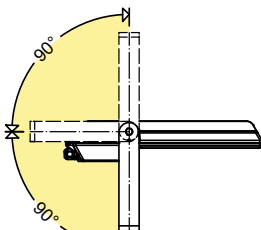
Connection: 3-pole terminal, max. clamping range 2,5 mm².

Cable entry: 1 cable entry M20 x 1.5 (1 cable gland).

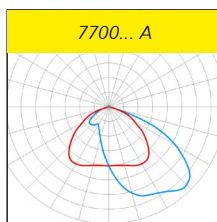
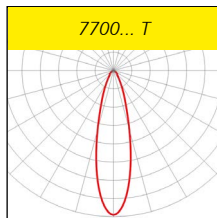
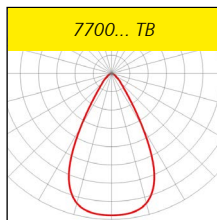
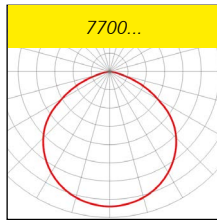
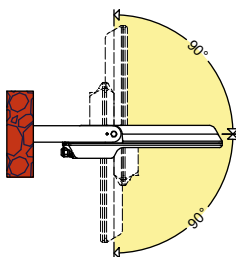
Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting or for direct pole mounting in conjunction with pipe clamps ROB 60/76 G2 (see accessories).



Swivel range



Standard Mounting



Exclusively D4i control gear is being used in RFL luminaires from SCHUCH. All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from SCHUCH. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -40°C up to +40°C

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class II (SKII)
- extremely narrow beam (TX)
- asymmetrical wide beam (AB-optics)
- low glare optics (ABL)
- high protection (HR) against corrosive atmospheres or harmful gases
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- cable looping at 1 small side (RR)
- special painting in RAL colours (SL)

Product highlights:

- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- subsequent use of a lighting management system possible at any time
- tool-free, quick assembly of the light management system components
- standardized Zhaga compliant socket allows free choice of light management system
- ECG with surge voltage resistance 10kV
- optimized thermal management due to direct adaption of the LED-modules to the housing
- homogeneous illumination due to the Multi-Layer-Technology
- optimal light distribution due to highly efficient optics
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components, ECG replaceable on-site
- eco-friendly, no light emission into the upper half-space, ULOR=0 (Plane surface floodlight)
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and Socket
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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7700 ... RFLO



Floodlight / Plane Surface Floodlight with a socket on the top side of the luminaire

colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

77002 0033	7700 3203 RFLO	70	11.360	162	9,5
77002 0034	7700 3203TB RFLO				
77002 0035	7700 3203T RFLO				
77002 0036	7700 3203A RFLO				
77002 0037	7700 4803 RFLO	106	16.790	158	9,7
77002 0038	7700 4803TB RFLO				
77002 0039	7700 4803T RFLO				
77002 0040	7700 4803A RFLO				
77002 0041	7700 6403 RFLO	140	21.940	157	9,7
77002 0042	7700 6403TB RFLO				
77002 0043	7700 6403T RFLO				
77002 0044	7700 6403A RFLO				

colour temperature 3.000K (light colour 730)

77002 0045	7700 3203 730 RFLO	70	10.790	154	9,5
77002 0046	7700 3203TB 730 RFLO				
77002 0047	7700 3203T 730 RFLO				
77002 0048	7700 3203A 730 RFLO				
77002 0049	7700 4803 730 RFLO	106	15.950	150	9,7
77002 0050	7700 4803TB 730 RFLO				
77002 0051	7700 4803T 730 RFLO				
77002 0052	7700 4803A 730 RFLO				
77002 0053	7700 6403 730 RFLO	140	20.840	149	9,7
77002 0054	7700 6403TB 730 RFLO				
77002 0055	7700 6403T 730 RFLO				
77002 0056	7700 6403A 730 RFLO				

7700 ... RFLU



Floodlight / Plane Surface Floodlight with a socket on the bottom side of the luminaire

colour temperature 4.000K (light colour 740)

77002 0001	7700 3203 RFLU	70	11.360	162	9,5
77002 0007	7700 3203TB RFLU				
77002 0010	7700 3203T RFLU				
77002 0004	7700 3203A RFLU				
77002 0002	7700 4803 RFLU	106	16.790	158	9,7
77002 0008	7700 4803TB RFLU				
77002 0011	7700 4803T RFLU				
77002 0005	7700 4803A RFLU				
77002 0003	7700 6403 RFLU	140	21.940	157	9,7
77002 0009	7700 6403TB RFLU				
77002 0012	7700 6403T RFLU				
77002 0006	7700 6403A RFLU				

colour temperature 3.000K (light colour 730)

77002 0014	7700 3203 730 RFLU	70	10.790	154	9,5
77002 0015	7700 3203TB 730 RFLU				
77002 0016	7700 3203T 730 RFLU				
77002 0023	7700 3203A 730 RFLU				
77002 0017	7700 4803 730 RFLU	106	15.950	150	9,7
77002 0018	7700 4803TB 730 RFLU				
77002 0019	7700 4803T 730 RFLU				
77002 0024	7700 4803A 730 RFLU				
77002 0020	7700 6403 730 RFLU	140	20.840	149	9,7
77002 0021	7700 6403TB 730 RFLU				
77002 0022	7700 6403T 730 RFLU				
77002 0025	7700 6403A 730 RFLU				

Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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7700 ... RFLOU



Floodlight / Plane Surface Floodlight with a socket on the top and bottom side of the luminaire

colour temperature 4.000K (light colour 740)

77002 0057	7700 3203 RFLOU	70	11.360	162	9,5
77002 0031	7700 3203TB RFLOU				
77002 0058	7700 3203T RFLOU				
77002 0030	7700 3203A RFLOU				
77002 0059	7700 4803 RFLOU	106	16.790	158	9,7
77002 0060	7700 4803TB RFLOU				
77002 0061	7700 4803T RFLOU				
77002 0062	7700 4803A RFLOU				
77002 0063	7700 6403 RFLOU	140	21.940	157	9,7
77002 0064	7700 6403TB RFLOU				
77002 0065	7700 6403T RFLOU				
77002 0066	7700 6403A RFLOU				

colour temperature 3.000K (light colour 730)

77002 0067	7700 3203 730 RFLOU	70	10.790	154	9,5
77002 0068	7700 3203TB 730 RFLOU				
77002 0069	7700 3203T 730 RFLOU				
77002 0070	7700 3203A 730 RFLOU				
77002 0071	7700 4803 730 RFLOU	106	15.950	150	9,7
77002 0072	7700 4803TB 730 RFLOU				
77002 0073	7700 4803T 730 RFLOU				
77002 0074	7700 4803A 730 RFLOU				
77002 0075	7700 6403 730 RFLOU	140	20.840	149	9,7
77002 0076	7700 6403TB 730 RFLOU				
77002 0077	7700 6403T 730 RFLOU				
77002 0032	7700 6403A 730 RFLOU				

! Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.

RFL LIMAS HUB3 G2 / RFL LIMAS HUB3 G2 GPS SIM



RFL LIMAS BM RAD HUB LPH max. 8m



RFL LIMAS BM RAD MA LPH max. 10m



RFL BM/DS IR HUB LPH max. 12m



LIMAS USB-Dongle



All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.

System components

Article No.	Type	
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	radio control with GPS antenna and photocell (twilight control) with integrated SIM card
90546 9014	RFL LIMAS HUB3 G2	radio control with photocell (twilight control)
90546 9011	RFL LIMAS BM RAD HUB LPH max. 8m	radio control with integrated radar motion sensors
90546 9012	RFL LIMAS BM RAD MA LPH max. 10m	radio control with integrated radar motion sensors for pole mounting
90546 9000	RFL DS20 HUB 20lux ON/OFF	twilight switch for autonomous control of RFLO luminaires
90546 9004	RFL BM/DS IR HUB LPH max. 8m	infrared motion sensor - can only be used in conjunction with RFL LIMAS HUB3 G2 and RFL LIMAS HUB3 G2 GPS SIM
90546 9006	RFL BM/DS IR HUB LPH max. 12m	infrared motion sensor / twilight switch - also for standalone operation

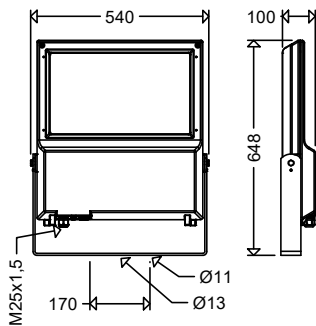
Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

Control components

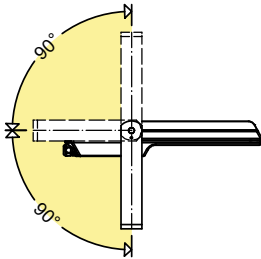
Article No.	Type	
90545 0001	LIMAS Dongle USB	enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	control element with photocell/ twilight switch, GPS antenna and SIM card

Accessories / Spare Parts

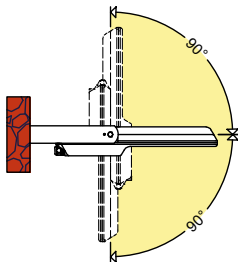
Article no.	Type	
78001 9002	ABD 7700	cover, pane safety glas clear, for 7700...
75739 9010	7700/7800/1 M	pole top for single mounting; galvanised steel
75739 9011	7700/7800/2 M	pole top for dual mounting; galvanised steel
90270 0006	ROB 60/76 G2	pipe clamp for direct pole mounting or on multiple post top adapters; galvanised steel
90120 9011	2530	plastic cable gland M20 x 1,5 black
75350 0034	SD 7700 ST	vibration absorbing suspension device for series 7700, galvanised steel



Swivel range



Standard Mounting



FOCO XL LED Floodlight / Plane Surface Floodlight Series 7800...

Applications:

Industrial areas, large equipment for open-cast mining, stockyards, installation areas, object protection and fence lighting, construction zone, illumination of building and facades etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated DB 702 (mica-iron paint, grey).

Upper part: With LED- and optics-modules

Lower part: With electronic ballast, glass cover, cable entry with cable relief and pressure compensation system, retractable.

Glass: Flat safety glass pane, resistant to temperature changes, impact resistant IK09, silicone gasket.

Light distribution: With optics narrow-wide (TB), narrow (T) or asymmetrical beam (A), without optics wide beam.

Connection: 3-pole terminal, max. clamping range 2,5 mm².

Cable entry: 1 cable entry M25 x 1.5 (1 cable gland).

Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting or for direct pole mounting in conjunction with pipe clamps **ROB 60/76 G2** (see accessories).

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

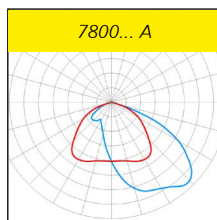
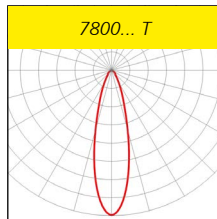
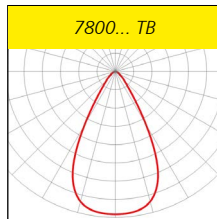
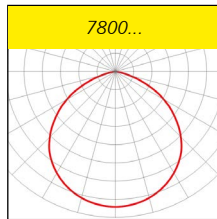
Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -40°C up to +40°C

Options:

- 2,200K, **light colour 722** (approx. 15% lower luminous flux)
- 1,800K, **light colour 518 „Amber“** (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class II (SKII)
- asymmetrical wide beam (AB-optics)
- low glare optics (ABL)
- extremely narrow beam (TX)
- high protection (HR) against corrosive atmospheres or harmful gases
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP)
- inrush current limiter (ESSB)
- Light Management System (LIMAS) in protection class I (SKI)
- extended Swivel range (ESB)
- cable looping at 1 small side (RR)
- vibration-resistant design (RF)
- special painting in RAL colours (SL)



Product highlights:

- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- optimal light distribution due to highly efficient optics
- homogeneous illumination due to the **Multi-Layer-Technology** i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- comfortable maintenance due to removable lower part of the housing, large opening allows easy access to the terminal box and the electrical components, ECG replaceable on-site
- eco-friendly, no light emission into the upper half-space, **ULOR=0** (Plane surface floodlight)
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the **Dark Sky requirements**
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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7800 ...



Floodlight / Plane Surface Floodlight

colour temperature 4.000K (light colour 740)

All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

78000 0011	7800 6403	140	22.650	162	15,9
78000 0001	7800 6403TB				
78000 0041	7800 6403T				
78000 0021	7800 6403A				
78000 0012	7800 12803	280	43.920	157	17
78000 0002	7800 12803TB				
78000 0042	7800 12803T				
78000 0022	7800 12803A				

colour temperature 3.000K (light colour 730)

78000 0112	7800 6403 730	140	21.520	154	15,9
78000 0113	7800 6403TB 730				
78000 0114	7800 6403T 730				
78000 0050	7800 6403A 730	280	41.720	149	17
78000 0115	7800 12803 730				
78000 0057	7800 12803TB 730				
78000 0116	7800 12803T 730				
78000 0054	7800 12803A 730				

Also available with output reduction (LR / LA) and constant luminous flux function (CL) or combinations of the functions (CL LR / CL LA)



Accessories / Spare Parts

Article no.	Type	
78001 9001	ABD 7800	cover, pane safety glas clear, for 7800...
75739 9010	7700/7800/1 M	pole top for single mounting; galvanised steel
75739 9011	7700/7800/2 M	pole top for dual mounting; galvanised steel
90270 0006	ROB 60/76 G2	pipe clamp for direct pole mounting or on multiple post top adapters; galvanised steel
90117 9000	2537	plastic cable gland M25 x 1,5 black
75350 0033	SD 7800 ST	vibration absorbing suspension device for series 7800, galvanised steel

All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.

NEW

FOCO XL LED Floodlight / Plane Surface Floodlight with variable setting of the luminous flux Series 7800... VARIO



Applications:

Industrial areas, large equipment for open-cast mining, stockyards, installation areas, object protection and fence lighting, construction zone, illumination of building and facades etc.

Design:

Housing: Die-cast aluminium, 2-parts, powder coated DB 702 (mica-iron paint, grey).

Upper part: With LED- and optics-modules

Lower part: With electronic ballast, glass cover, cable entry with cable relief and pressure compensation system, retractable.

Glass: Flat safety glass pane, resistant to

temperature changes, impact resistant IK09, silicone gasket.

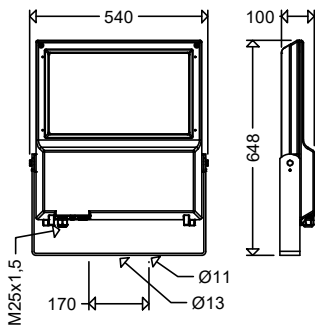
Switch for setting the luminous flux in the terminal compartment, accessible from the outside.

Light distribution: With optics narrow-wide (TB), narrow (T) or asymmetrical beam (A), without optics wide beam.

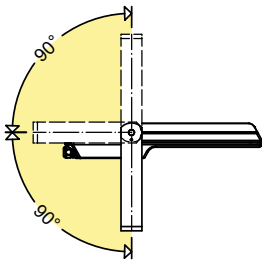
Connection: 3-pole terminal, max. clamping range 2,5 mm².

Cable entry: 1 cable entry M25 x 1.5 (1 cable gland).

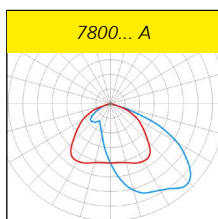
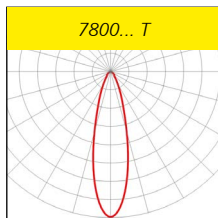
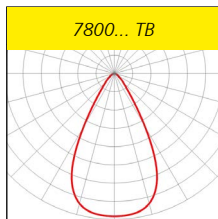
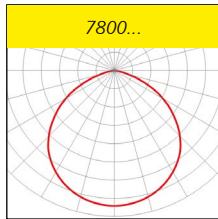
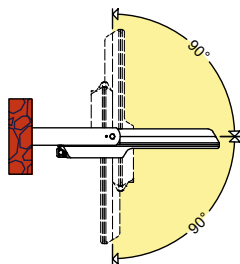
Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting or for direct pole mounting in conjunction with pipe clamps **ROB 60/76 G2** (see accessories).



Swivel range



Standard Mounting



Electrical design:

LED module: 4,000K or 3,000K, R_a > 70, service life L₉₀ > 100,000h, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Alternative dimming levels possible.

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -40°C up to +40°C

Options:

- 2,200K, light colour 722

(approx. 15% lower luminous flux)

- 1,800K, light colour 518 „Amber“

(approx. 45% lower luminous flux)

- adaptive Light EcoTune (ET)

- protection class II (SKII)

- asymmetrical wide beam (AB-optics)

- low glare optics (ABL)

- extremely narrow beam (TX)

- high protection (HR) against corrosive atmospheres or harmful gases

- seawater-resistant version (SWP)

- for connection to group or central battery systems (ZB) or emergency lighting networks respectively

- additional overvoltage protection (OP) in SKI

- inrush current limiter (ESSB)

- extended Swivel range (ESB)

- cable looping at 1 small side (RR)

- vibration-resistant design (RF)

- with variable setting of the luminous flux via app (VARIO NFC)

- special painting in RAL colours (SL)

Product highlights:

- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- optimal light distribution due to highly efficient optics
- homogeneous illumination due to the Multi-Layer-Technology i.e. every individual LED illuminates the whole surface, the light curves of the individual LEDs are overlapping.
- high flexibility by nearly continuous adjustment of the luminous flux
- eco-friendly, no light emission into the upper half-space, ULOR=0 (Plane surface floodlight)
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)
- GreenLine luminaire, outstanding sustainable design

! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Power/ consumption [W]	Luminous flux [lm] ¹⁾	Luminous efficacy [lm/W] (up to)	Substitute for ca. *	Weight [ca. kg] (without packaging)
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7800 ... VARIO

The luminous flux is variably adjustable. The Connected load will change depending on the setting of the luminous flux. In the table you will find examples of settings with reference to common conventional versions. Intermediate values are also possible. Setting table on request.

Floodlight / Plane Surface Floodlight

colour temperature 4.000K (light colour 740)

78003 0001	7800 L210 VARIO	32 - 140	5.550 - 22.650	173	2 x HST 70 - HME 400	15,9
78003 0003	7800 L210TB VARIO					
78003 0004	7800 L210T VARIO					
78003 0002	7800 L210A VARIO					

78003 0009	7800 L420 VARIO	64 - 280	10.860 - 43.920	170	HSE 150 - 2 x HIE 400	17
78003 0011	7800 L420TB VARIO					
78003 0012	7800 L420T VARIO					
78003 0010	7800 L420A VARIO					

colour temperature 3.000K (light colour 730)

78003 0005	7800 L210 VARIO 730	32 - 140	5.270 - 21.520	165	2 x HST 70 - HME 400	15,9
78003 0007	7800 L210TB VARIO 730					
78003 0008	7800 L210T VARIO 730					
78003 0006	7800 L210A VARIO 730					

78003 0013	7800 L420 VARIO 730	64 - 280	10.320 - 41.720	161	HSE 150 - 2 x HIE 400	17
78003 0015	7800 L420TB VARIO 730					
78003 0016	7800 L420T VARIO 730					
78003 0014	7800 L420A VARIO 730					

Factory setting L210: 140 W; replaces approx. HME 400

Factory setting L420: 280 W; replaces approx. 2 x HIE 400

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

1) possible setting range

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



All luminaires also available with luminous flux adjustment via smartphone app (NFC version).

! Also available with output reduction (LR / LA) and constant luminous flux function (CL) or combinations of the functions (CL LR / CL LA)



Accessories / Spare Parts

Article no.	Type	
78001 9001	ABD 7800	cover, pane safety glas clear, for 7800...
75739 9010	7700/7800/1 M	pole top for single mounting; galvanised steel
75739 9011	7700/7800/2 M	pole top for dual mounting; galvanised steel
90270 0006	ROB 60/76 G2	pipe clamp for direct pole mounting or on multiple post top adapters; galvanised steel
90117 9000	2537	plastic cable gland M25 x 1,5 black
75350 0033	SD 7800 ST	vibration absorbing suspension device for series 7800, galvanised steel

All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.



FOCO XL Plane Surface Floodlight Ready for Light Management System Series 7800... RFL

Applications:

Industrial areas, large equipment for open-cast mining, stockyards, installation areas, object protection and fence lighting, construction zone, illumination of building and facades etc.

Design:

The luminaires are prepared for the subsequent use of a light management system. Integrated sockets allow light management components to be retrofitted without tools.

Housing: Die-cast aluminium, 2-parts, powder coated DB 702 (mica-iron paint, grey).

Upper part: With LED- and optics-modules, **Lower part:** With electronic ballast, glass cover, cable entry with cable relief,

and pressure compensation system retractable.

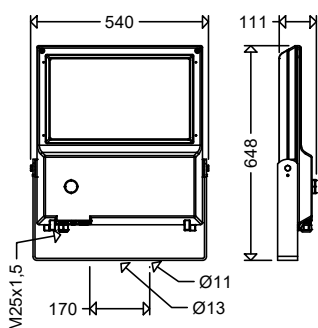
Glass: Flat safety glass pane, resistant to temperature changes, impact resistant IK09, silicone gasket.

Light distribution: With optics narrow-wide (TB), narrow (T) or asymmetrical beam (A), without optics wide beam

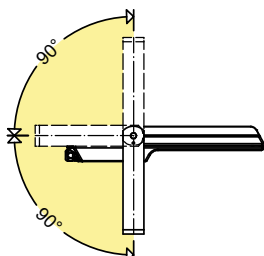
Connection: 3-pole terminal, max. clamping range 2,5 mm².

Cable entry: 1 cable entry M25 x 1.5 (1 cable gland).

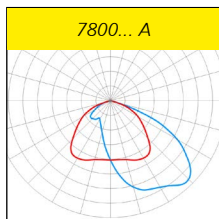
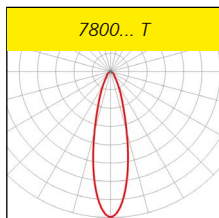
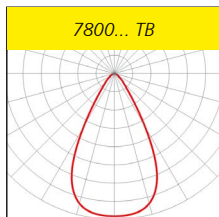
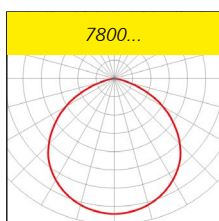
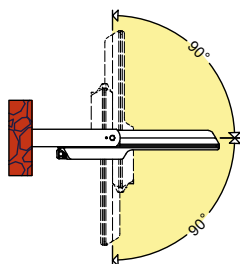
Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting or for direct pole mounting in conjunction with pipe clamps **ROB 60/76 G2** (see accessories).



Swivel range



Standard Mounting



Exclusively D4i control gear is being used in RFL luminaires from SCHUCH. All D4i Zhaga Book 18 certified controllers and D4i Zhaga Book 18 certified sensors available on the market can be used in combination with RFL luminaires from SCHUCH. Controllers and sensors which do not comply with the D4i standard can limit the functionality of the luminaires and components. Moreover, in individual cases, such non-certified components may cause damage to both the luminaires and the components.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

On request, the luminaires are also available with the following configurations:

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.

Ambient temperature: -40°C up to +40°C

Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)
- adaptive Light EcoTune (ET)
- protection class II (SKII)
- asymmetrical wide beam (AB-optics)
- low glare optics (ABL)
- extremely narrow beam (TX)
- extremely asymmetrical beam (AX)
- high protection (HR) against corrosive atmospheres or harmful gases
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency lighting networks respectively
- additional overvoltage protection (OP) in SKI
- inrush current limiter (ESSB)
- cable looping at 1 small side (RR)
- special painting in RAL colours (SL)

Product highlights:

- subsequent use of a lighting management system possible at any time
- tool-free, quick assembly of the light management system components
- standardized Zhaga compliant socket allows free choice of light management system
- ECG with surge voltage resistance 10kV
- optimized thermal management due to direct adaption of the LED-modules to the housing
- homogeneous illumination due to the Multi-Layer-Technology
- optimal light distribution due to highly efficient optics
- eco-friendly, no light emission into the upper half-space, $ULOR=0$ (Plane surface floodlight)
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the Dark Sky requirements
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga) and Socket
- GreenLine luminaire, outstanding sustainable design

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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7800 ... RFLO

Floodlight / Plane Surface Floodlight with a socket on the top side of the luminaire
colour temperature 4.000K (light colour 740)

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.

78002 0025	7800 6403 RFLO	140	22.650	162	15,9
78002 0026	7800 6403TB RFLO				
78002 0027	7800 6403T RFLO				
78002 0028	7800 6403A RFLO				
78002 0029	7800 12803 RFLO	280	43.920	157	17
78002 0030	7800 12803TB RFLO				
78002 0031	7800 12803T RFLO				
78002 0032	7800 12803A RFLO				

colour temperature 3.000K (light colour 730)

78002 0033	7800 6403 730 RFLO	140	21.520	154	15,9
78002 0034	7800 6403TB 730 RFLO				
78002 0035	7800 6403T 730 RFLO				
78002 0036	7800 6403A 730 RFLO				
78002 0037	7800 12803 730 RFLO	280	41.720	149	17
78002 0038	7800 12803TB 730 RFLO				
78002 0039	7800 12803T 730 RFLO				
78002 0040	7800 12803A 730 RFLO				



7800 ... RFLU

Floodlight / Plane Surface Floodlight with a socket on the bottom side of the luminaire
colour temperature 4.000K (light colour 740)

78002 0001	7800 6403 RFLU	140	22.650	162	15,9
78002 0005	7800 6403TB RFLU				
78002 0007	7800 6403T RFLU				
78002 0003	7800 6403A RFLU				
78002 0002	7800 12803 RFLU	280	43.920	157	17
78002 0006	7800 12803TB RFLU				
78002 0008	7800 12803T RFLU				
78002 0004	7800 12803A RFLU				

colour temperature 3.000K (light colour 730)

78002 0012	7800 6403 730 RFLU	140	21.520	154	15,9
78002 0013	7800 6403TB 730 RFLU				
78002 0014	7800 6403T 730 RFLU				
78002 0019	7800 6403A 730 RFLU				
78002 0015	7800 12803 730 RFLU	280	41.720	149	17
78002 0016	7800 12803TB 730 RFLU				
78002 0017	7800 12803T 730 RFLU				
78002 0018	7800 12803A 730 RFLU				

! Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg] (without packing material)
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7800 ... RFLOU



Floodlight / Plane Surface Floodlight with a socket on the top and bottom side of the luminaire

colour temperature 4.000K (light colour 740)

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg]
78002 0041	7800 6403 RFLOU	140	22.650	162	15,9
78002 0042	7800 6403TB RFLOU				
78002 0043	7800 6403T RFLOU				
78002 0044	7800 6403A RFLOU				
78002 0045	7800 12803 RFLOU	280	43.920	157	17
78002 0046	7800 12803TB RFLOU				
78002 0047	7800 12803T RFLOU				
78002 0010	7800 12803A RFLOU				

colour temperature 3.000K (light colour 730)

Article No.	Type	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [kg]
78002 0048	7800 6403 730 RFLOU	140	21.520	154	15,9
78002 0049	7800 6403TB 730 RFLOU				
78002 0050	7800 6403T 730 RFLOU				
78002 0020	7800 6403A 730 RFLOU				
78002 0051	7800 12803 730 RFLOU	280	41.720	149	17
78002 0052	7800 12803TB 730 RFLOU				
78002 0053	7800 12803T 730 RFLOU				
78002 0054	7800 12803A 730 RFLOU				

! Also available with output reduction LA or constant luminous flux function CL as well as combinations of these functions CL LA.

RFL LIMAS HUB3 G2 / RFL LIMAS HUB3 G2 GPS SIM



RFL LIMAS BM RAD HUB LPH max. 8m



RFL LIMAS BM RAD MA LPH max. 10m



RFL BM/DS IR HUB LPH max. 12m



LIMAS USB-Dongle



System components

Article No.	Type	
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	radio control with GPS antenna and photocell (twilight control) with integrated SIM card
90546 9014	RFL LIMAS HUB3 G2	radio control with photocell (twilight control)
90546 9011	RFL LIMAS BM RAD HUB LPH max. 8m	radio control with integrated radar motion sensors
90546 9012	RFL LIMAS BM RAD MA LPH max. 10m	radio control with integrated radar motion sensors for pole mounting
90546 9000	RFL DS20 HUB 20lux ON/OFF	twilight switch for autonomous control of RFLO luminaires
90546 9004	RFL BM/DS IR HUB LPH max. 8m	infrared motion sensor - can only be used in conjunction with RFL LIMAS HUB3 G2 and RFL LIMAS HUB3 G2 GPS SIM
90546 9006	RFL BM/DS IR HUB LPH max. 12m	infrared motion sensor / twilight switch - also for standalone operation

Other sensors, e.g. environmental sensors (fine dust, CO₂, weather station etc.) on request.

Control components

Article No.	Type	
90545 0001	LIMAS Dongle USB	enables programming/setup of LIMAS components on site using software and Windows operating system
90546 9010	RFL LIMAS HUB3 G2 GPS SIM	control element with photocell/ twilight switch, GPS antenna and SIM card

Accessories / Spare Parts

Article no.	Type	
78001 9001	ABD 7800	cover, pane safety glas clear, for 7800...
75739 9010	7700/7800/1 M	pole top for single mounting; galvanised steel
75739 9011	7700/7800/2 M	pole top for dual mounting; galvanised steel
90270 0006	ROB 60/76 G2	pipe clamp for direct pole mounting or on multiple post top adapters; galvanised steel
90117 9000	2537	plastic cable gland M25 x 1,5 black
75350 0033	SD 7800 ST	vibration absorbing suspension device for series 7800, galvanised steel

All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.



AREALO LED Large-Area Spotlight Series 7850...

Applications:

Large areas such as car parks, stockyards, loading station, container terminals, large opencast mining equipment, port facilities, airport apron lighting, sports facilities etc.

Design:

Housing: 1 - 3 segments of die-cast aluminium, powder coated in DB 702 (mica-iron paint, grey), with LED modules, optics, cover glass and pressure compensation system. Rear-mounted ECG-housing made of aluminium, powder coated in DB 702, with ECG and plug connection.

Segment holder and swivel bracket made

of galvanized steel.

Glass: Flat safety glass pane, resistant to temperature changes, impact resistant IK09, silicone gasket.

Light distribution: Extremely asymmetrical beam.

Connection: Quick connector (**Fast-Connect**), plug mounted to the housing, socket included. Wired ready for connection.

Mounting: Mounting bracket, swivel range 90°, adjustable in steps of 5°, with 3 drillings for direct wall mounting or pole mounting in connection with a pole mounting bracket respectively.

Electrical design:

LED module: 4,000K or 3,000K, $R_a > 70$, service life $L_{90} > 100,000h$, Zhaga compliant

ECG: 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

Light control:

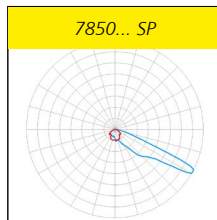
On request, the luminaires are also available with the following configurations:

Output reduction with control phase (LR): For reducing the luminous flux to 50% by switching off half of the LEDs per segment. Control phase (**LST**) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%).

Output reduction without control phase (LA): Autarkic dimming. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming steps.

Digital dimming with DALI interface (DIMD)

Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire service life of the LED-modules.



Options:

- 2,200K, light colour 722 (approx. 15% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (approx. 45% lower luminous flux)

- asymmetrical light distribution (A)
- seawater-resistant version (SWP)
- special painting in RAL colours (SL)

Product highlights:

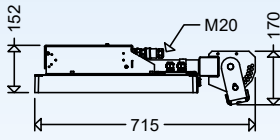
- robust, modular design
- excellent thermal management due to segment-surrounding cooling fin structure, excellent heat dissipation, with additional cooling by convection
- precise light distribution with highly efficient optics
- uniform illumination through Multi-Layer-Technology, this means each individual LED illuminates the entire area, the LCDs of the individual LEDs are overlapping
- luminaire can be rotated using a mounting bracket and swiveled by up to 90° in 5° increments, segments can also be tilted to achieve optimal lighting results
- simple, quick mounting:
 - Fasten the mounting bracket with the segment holder, attach and fix the segments individually, establish the electrical connection using the **FastConnect quick connector**
- quick ECG exchange with OV version, no supervisor required
- eco-friendly, no light emission into the upper half-space, ULOR=0
- all versions dimmable to 10% with color temperature up to max. 3,000K fulfill the **Dark Sky requirements**
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)



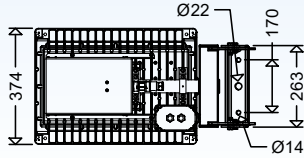
! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

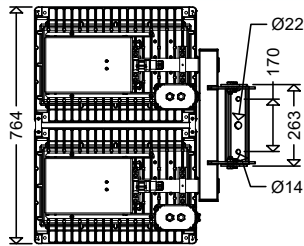
All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.



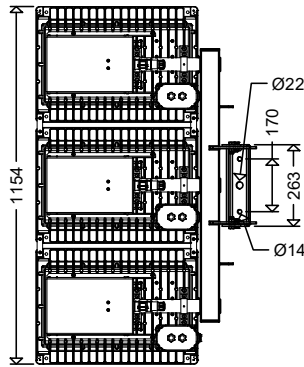
Version: 7850 1280...



Version: 7850 2560...

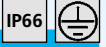


Version: 7850 3840...



Article no.	Type	Quantity of Segments	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [ca. kg] (without packaging)	Wind load area [m ²]
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7850... SP



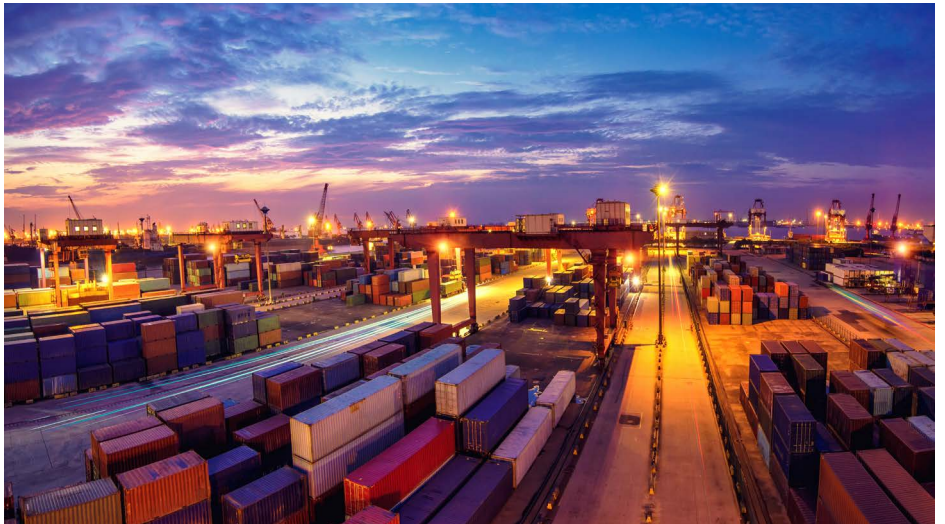
colour temperature 4.000K (light colour 740)

78501 0005	7850 12804SP	1	2	394	51.500	131	18,3	0,16
78502 0002	7850 25604SP	2	4	788	103.000	131	34,0	0,32
78503 0003	7850 38404SP	3	6	1.182	154.500	131	50,0	0,48
78501 0006	7850 12804SP DIMD	1	2	394	51.500	131	18,3	0,16
78502 0003	7850 25604SP DIMD	2	4	788	103.000	131	34,0	0,32
78503 0004	7850 38404SP DIMD	3	6	1.182	154.500	131	50,0	0,48

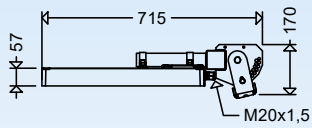
colour temperature 3.000K (light colour 730)

78501 0008	7850 12804SP 730	1	2	394	48.410	123	18,3	0,16
78502 0005	7850 25604SP 730	2	4	788	96.820	123	34,0	0,32
78503 0005	7850 38404SP 730	3	6	1.182	145.230	123	50,0	0,48
78501 0009	7850 12804SP DIMD 730	1	2	394	48.410	123	18,3	0,16
78502 0006	7850 25604SP DIMD 730	2	4	788	96.820	123	34,0	0,32
78503 0006	7850 38404SP DIMD 730	3	6	1.182	145.230	123	50,0	0,48

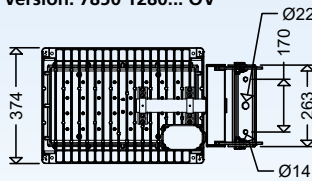
! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



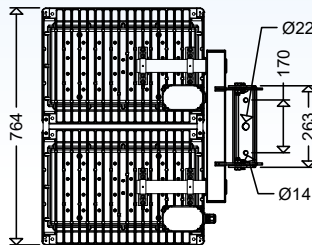
Outdoor
Light Fittings



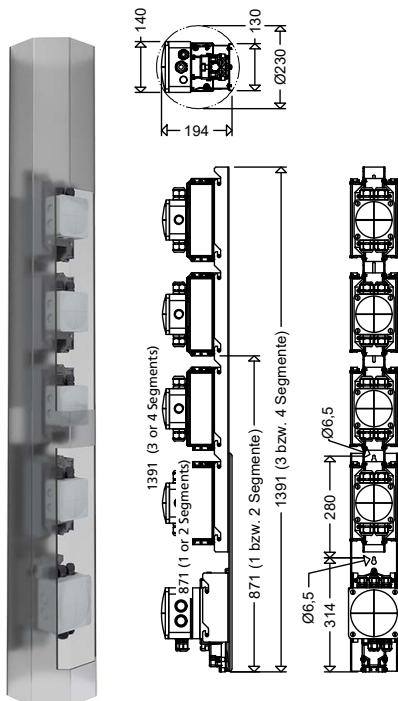
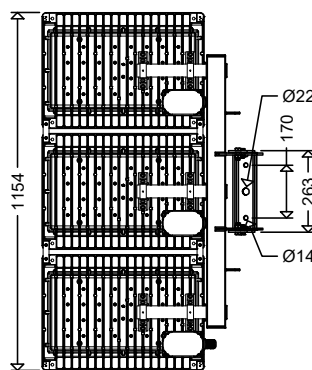
Version: 7850 1280... OV



Version: 7850 2560... OV

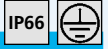


Version: 7850 3840... OV



Article no.	Type	Quantity of Segments	Quantity of ECG	Connected load [W]	Luminous flux [lm]	Luminous efficacy [lm/W]	Weight [ca. kg] (without packaging)	Wind load area [m ²]
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7850... SP OV



Version:

Like 7850 ... but without ballast housing (OV), internal pole mounting or external mounting unit require (see below), please order separately.

Connection: Via external junction box on the housing segment.

Cable entry: 1 cable entry M20 x 1.5, per housing segment; cable gland(s) included in the delivery.

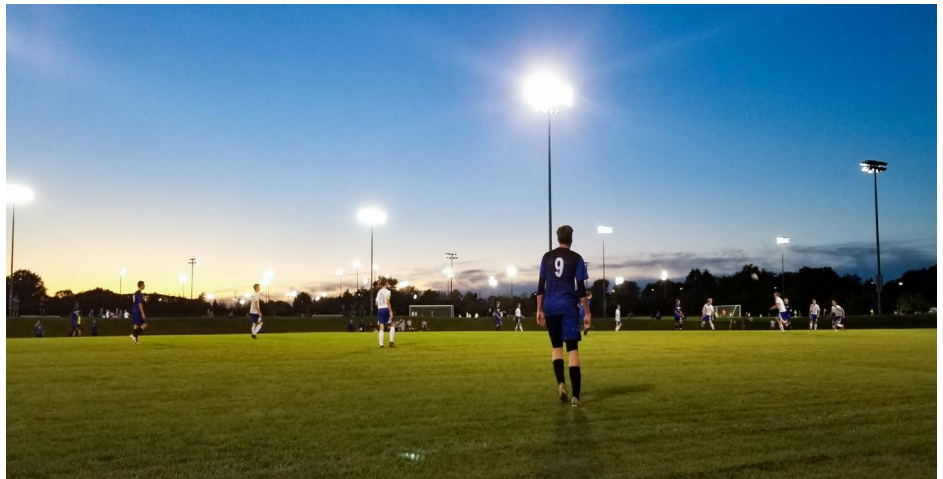
colour temperature 4.000K (light colour 740)

78501 0101	7850 12804SP OV	1	2	394	51.500	131	14,3	0,16
78502 0102	7850 25604SP OV	2	4	788	103.000	131	26,0	0,32
78503 0103	7850 38404SP OV	3	6	1.182	154.500	131	38,0	0,48

colour temperature 3.000K (light colour 730)

78501 0103	7850 12804SP 730 OV	1	2	394	48.410	123	14,3	0,16
78502 0104	7850 25604SP 730 OV	2	4	788	96.820	123	26,0	0,32
78503 0105	7850 38404SP 730 OV	3	6	1.182	145.230	123	38,0	0,48

! All light fittings also available with connected cable (H07RN-F or NYM) in the required length.



Internal pole mounting unit 7850 ME 1000



Design:

Gear rail with electronic ballast and cable junction box, wired ready for connection.

For connecting the housing segments to the pole installation unit, one 5-core cable is required for each housing segment.

Connection:

On the secondary side via FastConnect quick connector, plug included in delivery.

Pole mounting:

M6 screws for suspension profile with all electrical components.

Article no.	Type		Weight [ca. kg] (without packaging)
78509 0006	7850 1ME 1000	Internal pole mounting unit for 7850 12804SP OV	7,7
78509 0010	7850 1ME 1000 DIMD	Internal pole mounting unit for 7850 12804SP OV DIMD	7,7
78509 0007	7850 2ME 1000	Internal pole mounting unit for 7850 25604SP OV	10,9
78509 0011	7850 2ME 1000 DIMD	Internal pole mounting unit for 7850 25604SP OV DIMD	10,9
78509 0008	7850 3ME 1000	Internal pole mounting unit for 7850 38404SP OV	14,9
78509 0012	7850 3ME 1000 DIMD	Internal pole mounting unit for 7850 38404SP OV DIMD	14,9
78509 0009	7850 4ME 1000	Internal pole mounting unit for 2 x 7850 25604SP OV mounted in a mast	18,1
78509 0013	7850 4ME 1000 DIMD	Internal pole mounting unit for 2 x 7850 25604SP OV DIMD mounted in a mast	18,1

External pole mounting unit 7850 MA 1000



Design:

Housing and gear rail with electronic ballast wired ready for connection.

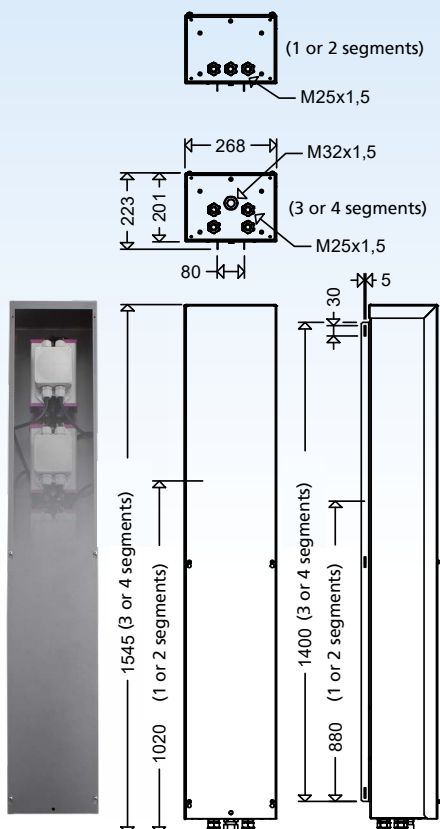
For connecting the housing segments to the pole installation unit, one 5-core cable is required for each housing segment.

Connection:

On the secondary side via FastConnect quick connector, plug included in delivery.

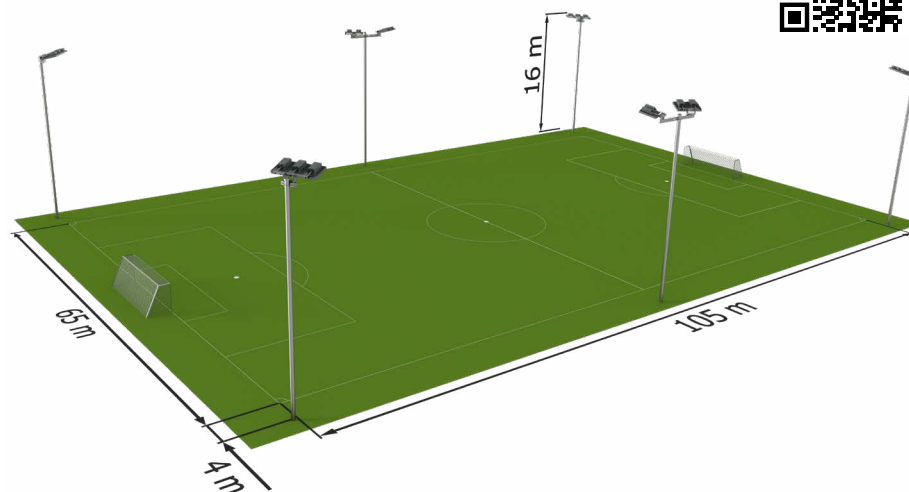
Pole mounting:

With corrosion-resistant fixing strap.



Article no.	Type		Weight [ca. kg] (without packaging)
78508 0005	7850 1MA 1000	External pole mounting unit for 7850 12804SP OV	16,7
78508 0009	7850 1MA 1000 DIMD	External pole mounting unit for 7850 12804SP OV DIMD	16,7
78508 0006	7850 2MA 1000	External pole mounting unit for 7850 25604SP OV	19,9
78508 0010	7850 2MA 1000 DIMD	External pole mounting unit for 7850 25604SP OV DIMD	19,9
78508 0007	7850 3MA 1000	External pole mounting unit for 7850 38404SP OV	28,9
78508 0011	7850 3MA 1000 DIMD	External pole mounting unit for 7850 38404SP OV DIMD	28,9
78508 0008	7850 4MA 1000	External pole mounting unit for 2 x 7850 25604SP OV mounted on a mast	30,1
78508 0012	7850 4MA 1000 DIMD	External pole mounting unit for 2 x 7850 25604SP OV DIMD mounted on a mast	30,1

You can find planning examples for sports field lighting in our [outdoor luminaires catalogue](#).



Accessories / Spare Parts

Article no.	Type	
78510 9000	ABD 7850	cover, pane safety class clear (1 segment), clear, for 7850...
78511 9000	TR 400	crossbar 400mm with cover cap and bracket
78511 9001	TR 1550	crossbar 1550mm with cover cap and bracket
78511 9002	TR 1800	crossbar 1800mm with cover cap and bracket
78510 9001	MA KBS	cable protection add-on element for 7850 .MA
78510 9002	BFB V2A 19/1000	tensioning band 1m, SS-CrNi, 19mm
78510 9003	BFS V2A 19	buckle, SS-CrNi, 19mm
90120 9011	2530	plastic cable gland M20 x 1,5 black

INTELLIGENT LIGHT CONTROL

Simply switching the floodlights of a sports facility on and off is neither efficient nor cost-saving and environmentally friendly. When converting to LED technology, the question of intelligent lighting control therefore arises.

If one then takes into account the subsidies from the federal government within the framework of the municipal guidelines as well as the state sports associations and possibly the respective federal state, which can current-

ly amount to up to 80% cumulatively at peak times, the decision should not be difficult.

Dimming

The introduction to light control

The simplest solution is to dim the floodlights via DALI. Since the maximum illuminance is usually only required for matches and competitions, energy can be saved to a considerable extent by continuously dimming or switching on preset

lighting levels during training. All that is required for this is an AREALO in DIMD version.



Smart lighting control with LIMAS Air

With the LIMAS Air light management system, you can conveniently control your floodlighting system via radio, without additional wiring, and save a maximum of energy costs at the same time.

The system is configured and controlled via a free app (Android or iOS) using a smartphone or tablet. Neither an internet connection nor a gateway is required for this.

The luminous flux of each individual luminaire/mast unit can be controlled separately. In conjunction with push-buttons, the pre-programmed scenes can be called up easily and conveniently, for example match and competition mode, training, half-field lighting or goalkeeper training, etc.

Please contact us. We will be happy to show you the possibilities LIMAS Air offers and support you in planning, projecting and configuring your system.



Control components

Art.-Nr.	Type		
78512 0001	7850 1VBOX RFL Lite TRA	Distribution box 1-fold for RFL LIMAS Air HUB TRI for 7850 12804SP DIMD as truss structure. Additionally RFL LIMAS Air HUB (90546 9013) is required (not included in delivery).	
78512 0002	7850 2VBOX RFL Lite TRA	Distributor box 2-fold for RFL LIMAS Air HUB TRI for 7850 25604SP DIMD as truss structure. Additionally RFL LIMAS Air HUB (90546 9013) is required (not included in delivery)	
78512 0003	7850 3VBOX RFL Lite TRA	Distribution box 3-fold for RFL LIMAS Air HUB TRI for 7850 38404SP DIMD as truss structure. Additionally RFL LIMAS Air HUB (90546 9013) is required (not included in delivery)	
78512 0010	7850 VBOX RFL Lite TRA	Distributor box for RFL LIMAS Air HUB TRI for 7850 12804SP OV, 7850 25604SP OV, 7850 38404SP OV as truss structure. Additionally RFL LIMAS Air HUB (90546 9013) is required (not included in delivery)	
10183 0002	LIMAS Air SENSBOX	Repeater	
90546 9013	RFL LIMAS Air HUB TRI	Light management controller (2.4 GHz mesh network) with radio antenna and RFL base.	
90547 9009	LIMAS Air TAST INTER UP max 4 KONT	Push-button interface for connecting up to 4 analogue push-button contacts, mounting in flush-mounted box/branch box.	
90547 9011	LIMAS Air TAST UP max 4 KONT	Battery-free quadruple wireless pushbutton, pressing the pushbutton generates energy to supply the pushbutton electronics.	



4861

Cast Aluminium Multi-Purpose Pole Arm Carrier Series 4861, 4862, 4864

Application: Series 42, 43, 46, 47, 48, 51, 52

Applications:

For mounting outdoor light fittings on flat walls and corners of buildings.

Design:

Aluminium casting: Natural finish, with four fixing holes \varnothing 10,5mm, and carrier shaft for galvanized steel pole arms.

Pole arm: \varnothing 42mm (100, 250, or 400mm long), or \varnothing 60mm (100 or 250mm long), with 2 fixing screws M8

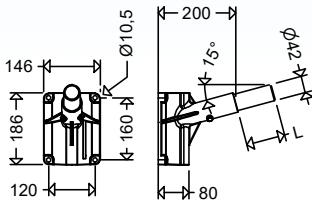
Pole arm assembly:

The \varnothing 42mm pole arm is pushed into the carrier shaft, the \varnothing 60mm pole arm is slipped over the carrier shaft. The pole arm is secured with 2 screws M8 (included in supply).

Options:

Special painting in RAL colours (SL)

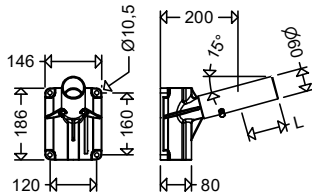
4862



4861, 4862, 4864

Article no.	Type	D	L	Weight ca. [kg]
48600 0002	4861	60	100	1,7
48600 0003	4862	42	250	1,9
48600 0005	4864	60	250	2,5

4861/64



4871 RAL 7035



4871 DB703

Welded Aluminium Standard Pole Arm Carrier Series 4871

Application: Series 42, 46, 47, 48, 51, 52

Applications:

For mounting outdoor light fittings on flat walls and corners of buildings.

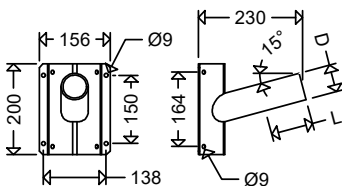
Design:

Aluminium plate 4 mm thick, powder coated grey (RAL

7035) or mica-iron (DB702), with eight fixing holes \varnothing 9mm and pole arm \varnothing 60mm (100mm long).

Options:

Special painting in RAL colours (SL)

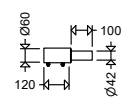
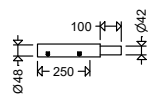
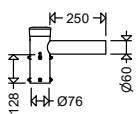
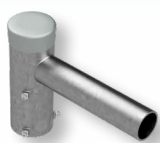
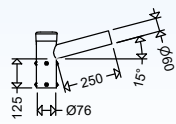
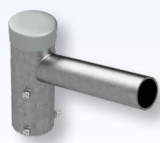
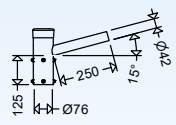
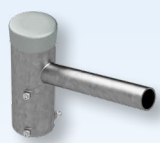


4871

Article no.	Type	D	L	Weight ca. [kg]
48700 0002	4871 RAL 7035	60	100	0,7
48700 0504	4871 DB703	60	100	0,7
48700 0506	4871 DB702	60	100	0,7

Pole-Top Brackets, Reducing Adapters

All pole-top and wall brackets with the exception of the aluminium tubular brackets are made from galvanised steel. Powder coating in any RAL colour is possible at extra charge.



Article No.	Type	Description	Weight ca. [kg]	for follwing light fittings:
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Pole-top brackets Ø 42mm

60099 0001	600/1	for 1 fitting	3,2	42, 46, 47, 48, 51, 52,
60099 0002	600/2	for 2 fittings	4,0	
60099 0003	600/3	for 3 fittings	4,8	
60099 0004	600/4	for 4 fittings no longer available	5,6	

Pole-top brackets Ø 60mm

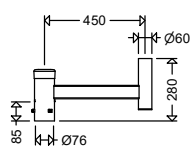
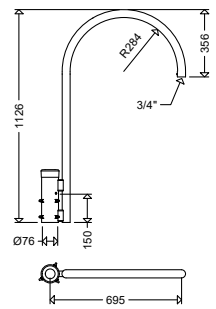
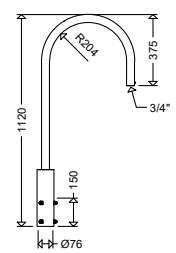
60199 0001	601/1	for 1 fitting	3,7	42, 46, 47, 48, 51, 52
60199 0002	601/2	for 2 fittings	5,1	
60199 0003	601/3	for 3 fittings	6,5	
60199 0004	601/4	for 4 fittings	7,9	

Pole-top brackets Ø 60mm

61099 0001	610/1	for 1 fitting	3,7	42, 46, 47, 48, 51, 52
61099 0002	610/2	for 2 fittings	5,1	
61099 0003	610/3	for 3 fittings	6,5	
61099 0004	610/4	for 4 fittings	7,9	

Reducers

60699 0001	606 (48/42)	①	2,8	42, 46, 47, 48, 51, 52
60799 0001	607 (60/42)	②	1,6	42, 46, 47, 48, 51, 52



Pole-top

61999 0001	619/1		8,8	564, 565
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Pole-top

72299 0001	722/1	for 1 fitting	8,2	564, 565
72299 0002	722/2	for 2 fittings	14,0	
72299 0003	722/3	for 3 fittings	19,9	
72299 0004	722/4	for 4 fittings	25,7	

Pole-top

62599 0001	625/1	for 1 fitting	4,6	541, 542, 543, 553, 556, 557, 558, 544, (with RZ 1), 46, 47, 48, 51, 52
62599 0002	625/2	for 2 fittings	7,0	
62599 0003	625/3	for 3 fittings	9,4	
62599 0004	625/4	for 4 fittings	11,8	



Emergency Light Fittings

Reliability in severe environment

Darkness means fear. Especially in buildings with a lot of people inside, panic will come up if the light fails.

For this reason and according to the relevant laws and standards, an emergency lighting system must be installed.

Due to special operating conditions, emergency light fitting design shall comply with particular requirements.

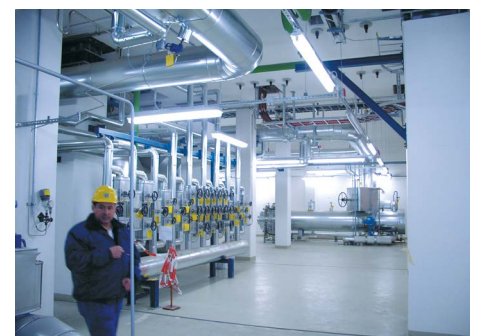
WIDE RANGE OF PRODUCTS, INCLUDING SPECIAL SOLUTIONS.

SCHUCH offers optimal solutions for each specific application of an emergency lighting system, e.g. highly dangerous work places and escape routes.

A wide range of products is available: From light fittings with built-in batteries to group and central battery systems connected ones.

An emergency version is available for almost each light fitting out of the wide range of SCHUCH products.

Applications with harsh conditions, such as high ambient temperatures or extreme variations in temperature, consistently challenge us to develop new custom-built solutions. Ambient temperatures of +50°C are often observed at power plants, waste incineration plants, recycling plants, chemical factories, as well as commercial kitchens, bakeries, etc. In such cases, SCHUCH light fittings can also help safely illuminate and indicate any escape route.



Emergency Light Fittings

Product	Series	Page
Lightmanagement		
LIMAS Line Pro -smart wired lighting control and central monitoring of self-contained emergency light fittings		266
LIMAS Line ESC - central monitoring of self-contained emergency light fittings		267
Light fittings with diffuser		
PROXIMA	161PX....	268-269
• with self-contained battery and automatic self-monitoring	... MA	269
• for central battery systems	... ZB	269
• for high ambient temperatures up to +50°C	... H50 MA	270-271
Series 161...	161...	272-273
• with self-contained battery and automatic self-monitoring	... MA	273
• for central battery systems	... ZB	273
Series 163... Generation 2	163... G2	274-275
• with self-contained battery and automatic self-monitoring	... MA	275
• for central battery systems	... ZB	275
LUXANO 2	167... G2	276-277
• with self-contained battery and automatic self-monitoring	... MA	277
• for central battery systems	... VARIO ZB	277
Series 164 KL...	164 KL...	278-279
<i>small polyester light fittings</i>		
• with self-contained battery and automatic self-monitoring	... MA	278
• for central battery systems	... ZB	279
Series 131...	131...	280-281
<i>small PC-light fittings</i>		
• with self-contained battery and automatic self-monitoring	... W MA	281
• for central battery systems	... ZB	281
Series 3611...	3611...	282-283
<i>small die-cast aluminium light fittings</i>		
• with self-contained battery and automatic self-monitoring	... MA	282
• for central battery systems	... ZB	283

Group or central battery systems

We recommend the use of systems of the make of INOTEC. Other makes upon request

Note

Emergency light fittings for zone 1/2 or 21/22 areas you may find in chapter „SCHUCH Explosion-Protected LED Light Fittings“
Emergency light fittings for other applications on demand.

LED TECHNOLOGY

2005

Introduction of first emergency light fittings with the new LED technology.

2011

Introduction of first explosion-protected LED light fittings equipped with a battery.

2015

The product range is extended by adding emergency LED light fittings with batteries to be operated at an ambient temperature up to +50 °C.

2017-2019

Due to the low energy consumption gains, luminaires of version ZB for connection to group or central battery systems or to emergency lighting networks are becoming increasingly important.

2020/2021

Introduction of the LIMAS Line lighting management system for smart control and central monitoring of self-contained emergency light fittings in accordance to DIN VDE V 0108-100-1.

2022/2023

A legend turns 50! With the PROXIMA 161PX... SCHUCH presents the next generation of the legendary 161... dustproof/waterproof luminaire series, including the single-battery version for temperatures up to +50°C.



Photo: BASF



LIMAS Line PRO - smart wired lighting control and centralised monitoring of self-contained emergency light fittings

With the LIMAS Line PRO light management system, every MA-Z self-contained light fitting becomes a smart luminaire. In addition to the control system, function and duration tests can also be carried out at any time, thereby realising central monitoring in accordance with DIN VDE V 0108-100-1.

Configuration and control are carried out via PC without additional software - a browser is all that is needed. The connection between the PC and LIMAS Line PRO can be realised either via an existing network or by establishing a peer-to-peer connection. An Internet connection is not required.

For further details and properties, see the chapter on lighting management systems.

LIMAS Line PRO SCE



Control components

Type	Art.-No.	
LIMAS Line PRO SCE	90545 0031	DALI2 controller for controlling up to 192 devices. Monitoring of single battery emergency lights possible.

System components

LIMAS Line IC



LIMAS Line DALI PS 240mA



LIMAS Line BM/DS PIR 4,0-14,0m R STE



LIMAS Line BM/DS HF 2,0-4,0m R STE



LIMAS Line MK4x10A



Type	Art.-No.	
LIMAS Line IC	90545 0015	DALI-2 input controller with 4 independent inputs for connection of floating contacts/buttons.
LIMAS Line DALI PS 240mA	90545 0016	DALI bus power supply with max. 240mA.
LIMAS Line BM/DS PIR 2,5-2,8m R STE	90545 0035	Infrared DALI2 motion detector including light sensor for mounting heights of 2.5-4m.
LIMAS Line BM/DS PIR 4,0-14,0m R STE	90545 0036	Infrared DALI2 motion detector including light sensor for heights up to 14m.
LIMAS Line BM/DS PIR 4,0-16,0m Q STE	90545 0037	Infrared DALI2 motion detector with light sensor for mounting heights up to 16m.
LIMAS Line BM/DS PIR 1,8-2,5m RH STE	90545 0038	Infrared DALI2 motion detector with light sensor for vertical wall mounting for height up to 2.5m.
LIMAS Line BM/DS PIR 2,5-5,0m Q STE	90545 0039	Infrared DALI2 motion detector with light sensor. For a mounting height of up to 5m and a maximum detection area of 6m x 23m.
LIMAS Line BM/DS HF 2,0-4,0m R STE	90545 0040	HF DALI2 motion detector with light sensor for a mounting height of up to 4.8m and a maximum diameter of the detection area of 8m.
LIMAS Line MK4x10A	90545 0041	Four potential-free relays, switchable with DALI. Suitable for signaling test and system states of single battery emergency lights.



LIMAS LINE ESC - central monitoring of self-contained emergency light fittings in accordance with DIN VED V 0108-100-1

LIMAS Line ESC dient ausschließlich zur zentralen Überwachung von Einzelbatterie-Notleuchten MA-Z. Die Bedienung erfolgt über das integrierte Touchscreen-Panel, ein PC ist nicht erforderlich.

For further details and properties, see the chapter on lighting management systems.

LIMAS Line ESC



Control components

Type	Art.-No.	
LIMAS Line ESC	90545 0042	7-inch touch panel/controller to monitor up to 64 single-battery emergency lights.

LIMAS Line MK4x10A

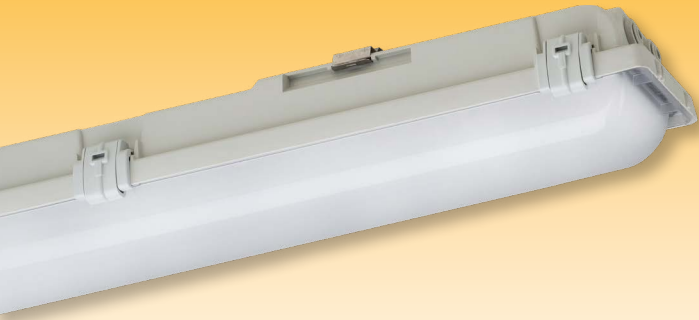


LIMAS Line ESC PS



System components

Type	Art.-No.	
LIMAS Line MK4x10A	90545 0041	Four potential-free relays, switchable with DALI. Suitable for signaling test and system states of single battery emergency lights.
LIMAS Line ESC PS	90545 0043	24V power supply for the LIMAS Line ESC controller.



PROXIMA

Dustproof/Waterproof LED Emergency Light Fitting with Diffuser Series 161PX ..

Applications:

In humid, wet and dusty locations for illuminating escape routes etc.

Mechanical Design:

Housing: Glass fibre reinforced polyester resin, foamed silicone gasket.

Diffuser: Injected, acrylic glass, frosted, additional clear cover over the LED-modules to ensure protection against contact (Types ...MA).

Closure: Three-part plastic safety clips (KKS), unloseable.

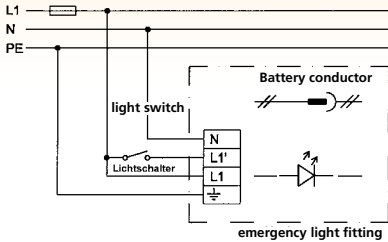
Reflector: Aluminium, painted can be suspended or removed and carries the electrical components.

Connection: 3/4-pole terminal.

Cable entries: 3 plugs M20, loop in-out possible without further modification.

Mounting: 2 stainless steel retaining clips, 2 brackets for chain suspension, holes pre-pressed for direct fixing, sealing and pressure disks included in scope of deliver.

Wiring diagram maintained/stand by operation



Installation: connect battery conductor
Decommission: disconnect battery conductor
Stand-by operation: do not connect L1'

Technical Data:

LED: Linear modules 4,000K, CRI > 80, service life L_{90} > 50.000h at 25°C ambient temperature, service life L_{80} > 70.000h and L_{70} > 100.000h at max. ambient temperature

Incorporated NiCd battery, electronic charger, short circuit protected battery and reverse battery protection

Electronic deep discharge protection acc. to EN 61347-2-7

Re-charging time: 24h, acc. to EN 60598-2-22

Automatic monitoring: of the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire

Mode of operation:

maintained operation = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

Stand-by operation: Emergency light switches on in the event of a power failure.

Connection voltage: 220-240V 50/60Hz

Ambient temperature: 0°C up to +40°C

Options:

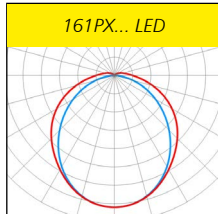
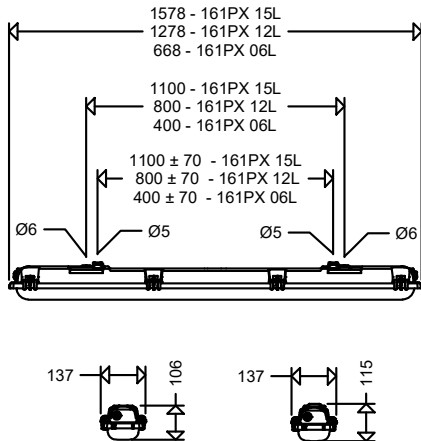
- 3.000K, 5.000K, 6.500K
- for higher ambient temperatures
- according to „International Featured Standard Food“ (IFS)
- for application in food industry (LM)
- PC-diffuser frosted (PC)
- stainless steel clips (KE)
- with dimming function via DALI2 interface, compatible with LIMAS Line (DIMD) Light Management System

For versions with self-contained battery:

- Emergency lighting unit with DALI interface for central monitoring, compatible with LIMAS Line PRO or Line ESC (MA-Z) Light Management System
- Through-wiring (see note)
- 4-conductor: L1, L1', N, PE or
- 6-conductor: L1, L1', L2', L3', N, PE

For versions with central battery system:

- with reduced luminous flux in DC-Mode (e. g.: 15%, 30%, 50%)
- with individual monitoring module light fittings
- with changeover switch (UW)



Standard cable entries for looping the mains cable on one side (loop in/loop out):

We deliver the light fittings with 2 cable entries on one small side. This feature allows an optimal adjustment to all local conditions and it will consequently save the typical quite expensive through wiring system. (Surcharge for 5-pole version).



Properties, limitations and details for controlling LED-light fittings:
 See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Advantages of the emergency light version:

- always ready for operation due to permanent trickle charging of the battery (MA-versions)
- safety in an emergency, immediate light with maximum luminous flux
- can be used up to +40°C ambient temperature
- with ZB version 100% luminous flux even in emergency operation

General product highlights:

- high-impact resistant housing, wall thickness 1.8 mm throughout
- diffuser with very high mechanical stability, wall thickness 2.0 mm throughout
- one enclosure width for all versions
- safety clips to ensure protection against contact, for MA versions, additional clear cover for the LED modules
- FastFix quick mounting system with retaining clips made of stainless steel
- flexible mounting with movable retaining clips
- front-side in/out wiring (3/4-pole) possible as standard due to 2 entries on one side
- variable cable entry possible through additional entries on the top of the enclosure at the front or in the centre, centring holes available
- homogeneous illumination by using frosted diffusers
- highest efficiency due to use of top-quality components
- high colour rendering CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

Article no.	Type	Connected load [W] (incl. battery charge)	Luminous flux [lm]	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Operating time 1h	Operating time 3h	Substitute for *	Weight [kg] (without packing material)
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161PX ../. MA



with self-contained battery and automatic self-monitoring

16140 0001	161PX 06L12/1 MA	13	1.340	630	103	•		1 x 18W	2,6
16140 0002	161PX 12L22/1 MA	18	2.380	840	132	•		1 x 36W	3,8
16140 0003	161PX 15L34/1 MA	24	3.430	830	143	•		1 x 58W	4,5
16140 0004	161PX 06L20/1 MA	19	2.260	630	119	•		2 x 18W	2,6
16140 0005	161PX 12L42/1 MA	30	4.220	840	141	•		2 x 36W	3,8
16140 0006	161PX 15L60/1 MA	42	6.130	830	146	•		2 x 58W	4,5
16140 0011	161PX 06L12/3 MA	13	1.340	630	103		•	1 x 18W	2,6
16140 0012	161PX 12L22/3 MA	18	2.380	840	132		•	1 x 36W	3,8
16140 0013	161PX 15L34/3 MA	24	3.430	830	143		•	1 x 58W	4,5
16140 0014	161PX 06L20/3 MA	19	2.260	630	119		•	2 x 18W	2,6
16140 0015	161PX 12L42/3 MA	30	4.220	840	141		•	2 x 36W	3,8
16140 0016	161PX 15L60/3 MA	42	6.130	830	146		•	2 x 58W	4,5

161PX .. ZB



for central battery systems

Applications:

For connection to group or central battery systems or to an emergency mains for illuminating escape routes.

We recommend Central Battery Systems from INOTEC.

Technical Data:

Light fitting with incorporated fuse for cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.

Connection voltage: 220-240V, 50/60Hz and 220V DC

Ambient temperature: from -20°C up to +40°C

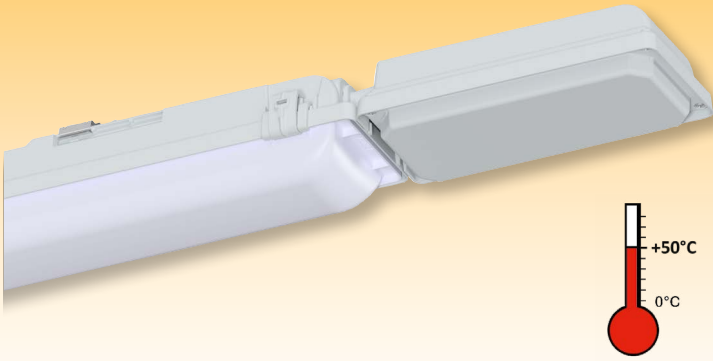
16140 0101	161PX 06L12 ZB	10	1.340	1.340	134			1 x 18W	1,7
16140 0102	161PX 12L22 ZB	15	2.380	2.380	159			1 x 36W	2,8
16140 0103	161PX 15L34 ZB	21	3.430	3.430	163			1 x 58W	3,4
16140 0104	161PX 06L20 ZB	16	2.260	2.260	141			2 x 18W	1,7
16140 0105	161PX 12L42 ZB	27	4.220	4.220	156			2 x 36W	2,8
16140 0106	161PX 15L60 ZB	39	6.130	6.130	157			2 x 58W	3,4
16140 0107	161PX 12L60 ZB	39	5.900	5.900	151			2 x 58W	2,8
16140 0108	161PX 15L75 ZB	49	7.410	7.410	151			> 2 x 58W	3,4

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

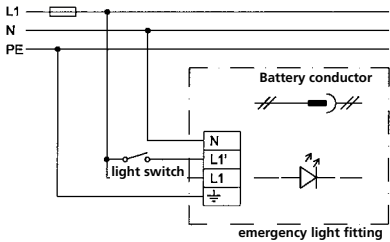
Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series 161PX...“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.

PROXIMA

Dustproof/Waterproof LED Emergency Light for high ambient temperatures up to +50°C Fitting with Diffuser Series 161PX... H50

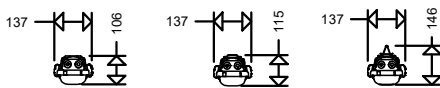
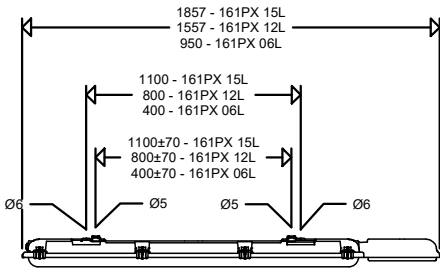


Wiring diagram maintained/stand by operation



- Installation:** connect battery conductor
- Decommission:** disconnect battery conductor
- Stand-by operation:** do not connect L1'

161PX ... H (with battery box)



Standard cable entries for looping the mains cable on one side (loop in/loop out):

We deliver the light fittings with 2 cable entries on one small side. This feature allows an optimal adjustment to all local conditions and it will consequently save the typical quite expensive through wiring system. (Surcharge for 6-pole version).



- Properties, limitations and details for controlling LED-light fittings:
- See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Applications:

In humid, wet and dusty locations for illuminating escape routes etc.

Mechanical Design:

Housing: Glass fibre reinforced polyester resin, with separate battery box at one small side of the housing, foamed silicone gasket.

Diffuser: Injected, acrylic glass, frosted, additional clear cover over the LED-modules to ensure protection against contact.

Closure: Three-part plastic safety clips (KKS), unloseable.

Reflector: Aluminium, painted can be suspended or removed and carries the electrical components.

Connection: 4-pole terminal.
Cable entries: 2 plugs M20, loop in-out possible without further modification.

Mounting: 2 stainless steel retaining clips, 2 brackets for chain suspension, holes pre-pressed for direct fixing, sealing and pressure disks included in scope of deliver.

Technical Data:

LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50.000h$ at 25°C ambient temperature, service life $L_{80} > 70.000h$ and $L_{70} > 100.000h$ at max. ambient temperature

Incorporated NiCd battery, electronic charger, short circuit protected battery and reverse battery protection

Electronic deep discharge protection acc. to EN 61347-2-7

Re-charging time: 24h, acc. to EN 60598-2-22

Automatic monitoring: of the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire

Mode of operation:

maintained operation = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

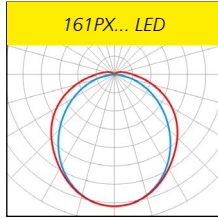
Stand-by operation: Emergency light switches on in the event of a power failure.

Connection voltage: 220-240V 50/60Hz

Ambient temperature: 0°C up to +50°C

Options:

- 3.000K, 5.000K, 6.500K
- for higher ambient temperatures
- according to „International Featured Standard Food“ (IFS)
- for application in food industry (LM)
- PC-diffuser frosted (PC)
- stainless steel clips (KE)
- with dimming function via DALI2 interface, compatible with LIMAS Line (DIMD) Light Management System
- Emergency lighting unit with DALI interface for central monitoring, compatible with LIMAS Line PRO or Line ESC (MA-Z) Light Management System



Advantages of the emergency light version:

- always ready for operation due to permanent trickle charging of the battery
- safety in an emergency, immediate light with maximum luminous flux
- can be used up to +50°C ambient temperature

General product highlights:

- high-impact resistant housing, wall thickness 1.8 mm throughout
- diffuser with very high mechanical stability, wall thickness 2.0 mm throughout
- one enclosure width for all versions
- safety clips to ensure protection against contact, additional clear cover for the LED modules
- FastFix quick mounting system with retaining clips made of stainless steel
- flexible mounting with movable retaining clips
- front-side in/out wiring (4-pole) possible as standard due to 2 entries on one side
- variable cable entry possible through additional entries on the top of the enclosure at the front or in the centre, centring holes available
- homogeneous illumination by using frosted diffusers
- highest efficiency due to use of top-quality components
- high colour rendering CRI > 80, according to the workplace guide lines suitable for nearly all plant locations
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using standardized LED-modules (Zhaga)

Article no.	Type	Connected load [W] (incl. battery charge)	Luminous flux [lm]	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Operating time 1h	Operating time 3h	Substitute for *	Weight [kg] (without packing material)
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161PX ..L../1 H50 MA



for high temperatures up to +50°C

Article no.	Type	Connected load [W]	Luminous flux [lm]	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Operating time 1h	Operating time 3h	Substitute for *	Weight [kg]
16144 0001	161PX 06L12/1 H50 MA	13	1.340	630	103	•		1 x 18W	3,4
16144 0002	161PX 12L22/1 H50 MA	18	2.380	840	132	•		1 x 36W	4,6
16144 0003	161PX 15L34/1 H50 MA	24	3.430	830	143	•		1 x 58W	5,3
16144 0004	161PX 06L20/1 H50 MA	19	2.260	630	119	•		2 x 18W	3,4
16144 0005	161PX 12L42/1 H50 MA	30	4.220	840	141	•		2 x 36W	4,6
16144 0006	161PX 15L60/1 H50 MA	42	6.130	830	146	•		2 x 58W	5,3
16144 0011	161PX 06L12/3 H50 MA	13	1.340	630	103		•	1 x 18W	3,4
16144 0012	161PX 12L22/3 H50 MA	18	2.380	840	132		•	1 x 36W	4,6
16144 0013	161PX 15L34/3 H50 MA	24	3.430	830	143		•	1 x 58W	5,3
16144 0014	161PX 06L20/3 H50 MA	19	2.260	630	119		•	2 x 18W	3,4
16144 0015	161PX 12L42/3 H50 MA	30	4.220	840	141		•	2 x 36W	4,6
16144 0016	161PX 15L60/3 H50 MA	42	6.130	830	146		•	2 x 58W	5,3

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Note:
For emergency light 161PX H with battery box please please note:
Through-wiring not possible.

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series 161PX... ” in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.



Dustproof/Waterproof LED Emergency Light Fitting with Diffuser Series 161 ..

Applications:

In humid, wet and dusty locations for illuminating escape routes etc.

Mechanical Design:

Housing: Glass fibre reinforced polyester resin, silicone gasket.

Diffuser: Injected, acrylic glass, frosted, additional clear cover over the LED-modules to ensure protection against contact (Types ...MA).

Closure: Three-part captive plastic clips

(KK), incl. 2 safety clips (KKS)

Reflector: Aluminium, painted can be suspended or removed and carries the electrical components.

Connection: 3/4-pole terminal.

Cable entries: 2 plugs M20.

Mounting: Closed knock-outs for direct ceiling mounting (to be opened at site). Sealing and pressure disks inside each fitting.

Technical Data:

LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50.000h$ at 25°C ambient temperature, service life $L_{80} > 70.000h$ and $L_{70} > 100.000h$ at max. ambient temperature

Incorporated NiCd battery, electronic charger, short circuit protected battery and reverse battery protection

Electronic deep discharge protection acc. to EN 61347-2-7

Re-charging time: 24h, acc. to EN 60598-2-22

Automatic monitoring: of the emergency light fitting according to EN 62034, indication of the test results by 2-coloured LED (luminescence diode) at the luminaire

Mode of operation:

maintained operation = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

Stand-by operation: Emergency light switches on in the event of a power failure.

Connection voltage: 220-240V 50/60Hz

Ambient temperature: 0°C up to +30°C

Options:

- 6.500K
- for higher ambient temperatures
- according to „International Featured Standard Food“ (IFS)
- for application in food industry (LM)
- PC-diffuser frosted (PC)
- stainless steel clips (KE)
- with dimming function via DALI2 interface, compatible with LIMAS Line (DIMD) Light Management System

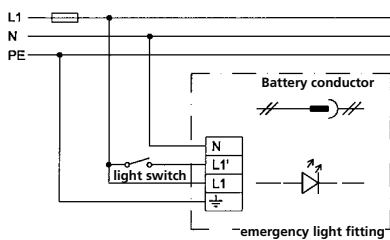
For versions with self-contained battery:

- Emergency lighting unit with DALI interface for central monitoring, compatible with LIMAS Line PRO or Line ESC (MA-Z) Light Management System
- Through-wiring
- 4-conductor: L1, L1', N, PE or
- 6-conductor: L1, L1', L2', L3', N, PE

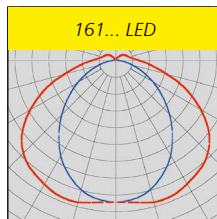
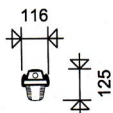
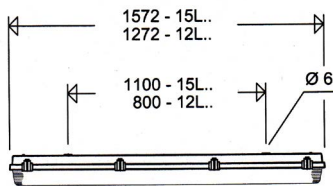
For versions with central battery system:

- with reduced luminous flux in DC-Mode (e. g.: 15%, 50% etc.)
- with separate module for monitoring individual light fittings

Wiring diagram maintained/stand by operation



Installation: connect battery conductor
Decommission: disconnect battery conductor
Stand-by operation: do not connect L1'



Product highlights:

- robust, high quality light fitting with outstanding mechanical strength, for rough industrial use
- always ready for operation due to permanent trickle charging of the battery (MA-versions)
- safety, 100 % luminous flux at low ambient temperatures (MA-versions)
- Central battery versions with 100% luminous flux in case of emergency (ZB-versions)
- homogeneous illumination by using frosted diffusers, no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour reproduction $Ra > 80$, according to the workplace guide lines suitable for nearly all plant locations
- reliable protection against contact due to additional clear cover (MA-versions)
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W] (incl. battery charge)	Luminous flux [lm]	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Operating time 1h	Operating time 3h	Substitute for *	Weight [kg] (without packing material)
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161 ../. MA



with self-contained battery and automatic self-monitoring

16118 0331	161 12L22/1 MA	17	2.390	890	141	•		1 x 36W	3,1
16118 0332	161 15L34/1 MA	23	3.440	940	150	•		1 x 58W	3,8
16118 0333	161 12L42/1 MA	29	4.240	890	146	•		2 x 36W	3,1
16118 0334	161 15L60/1 MA	41	6.160	940	150	•		2 x 58W	3,8
16118 0341	161 12L22/3 MA	18	2.390	890	133	•		1 x 36W	3,5
16118 0342	161 15L34/3 MA	24	3.440	940	143	•		1 x 58W	4,2
16118 0343	161 12L42/3 MA	30	4.240	890	141	•		2 x 36W	3,5
16118 0344	161 15L60/3 MA	42	6.160	940	147	•		2 x 58W	4,2

161 .. ZB



for central battery systems

Applications:

For connection to group or central battery systems or to an emergency mains for illuminating escape routes. We recommend Central Battery Systems from **INOTEC**.

Technical Data:

Light fitting with incorporated fuse for cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.

Connection voltage: 220-240V, 50/60Hz and 220V DC

Ambient temperature: from -20°C to +40°C (+30°C Types with high luminous flux)

16118 0104	161 12L22 ZB	15	2.390	2.390	159			1 x 36W	2,6
16118 0103	161 15L34 ZB	21	3.440	3.440	164			1 x 58W	3,0
16118 0049	161 12L42 ZB	27	4.240	4.240	157			2 x 36W	2,6
16118 0048	161 15L60 ZB	39	6.160	6.160	158			2 x 58W	3,0
16118 0083	161 12L60 ZB	39	5.920	5.920	152			2 x 58W	2,6
16118 0063	161 15L75 ZB	49	7.440	7.440	152			> 2 x 58W	3,0

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series **161/162.. LED**“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.

Dustproof/Waterproof LED Emergency Light Fitting with Diffuser Series 163 .. G2

Applications:

In humid, wet and dusty locations for illuminating escape routes.

Mechanical Design:

Housing: Glass fibre reinforced polyester resin, foamed gasket.

Diffuser: Acrylic glass for high mechanical strength, frosted, additional clear cover over the LED-modules to ensure protection against contact (Types ... MA).

Closure: Single-part plastic clips (KK), incl.

2 safety clips (KKS)

Reflector: Aluminium, painted, detachable carrying the electrical components.

Connection: 3/4-pole terminal.

Cable entries: Variable, closed knock-outs on the short and long sides, and on the top, 2 blanking plugs M20.

Mounting system: 2 holes for ceiling mounting. Sealing and pressure disks for sealing are supplied inside the fitting.

Technical data:

LED: Linear modules 4,000K, CRI > 80, service life $L_{90} > 50.000\text{h}$ at 25°C ambient temperature, service life $L_{80} > 70.000\text{h}$ and $L_{70} > 100.000\text{h}$ at max. ambient temperature

Incorporated NiCd battery, electronic charger, short circuit protected battery and reverse battery protection

Electronic deep discharge protection acc. to EN 61347-2-7

Re-charging time: 24h, acc. to EN 60598-2-22

Automatic monitoring the emergency light fitting according to EN 62034. Indication of the test results by 2-coloured LED (luminescence diode) at the luminaire.

Mode of operation:

maintained operation = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

Connection voltage: 220-240V 50/60Hz

Ambient temperature: 0°C up to +30°C

Options:

– 6.500 K

– according to „International Featured Standard Food“ (IFS)

– PC-diffuser stippled clear (PC)

– stainless steel clips (KE)

– with dimming function via DALI2 interface, compatible with LIMAS Line (DIMD) Light Management System

For versions with self-contained battery:

– Emergency lighting unit with DALI interface for central monitoring, compatible with LIMAS Line PRO or Line ESC (MA-Z) Light Management System

– through-wiring

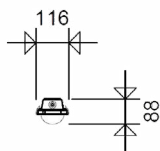
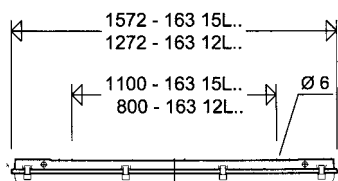
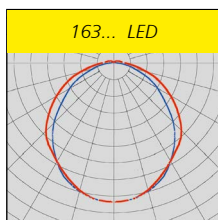
4-conductor: L1, L1', N, PE or

6-conductor: L1, L1', L2', L3', N, PE

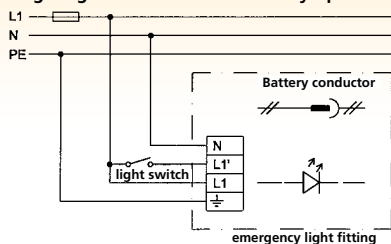
For versions with central battery system:

– with reduced luminous flux in DC mode (e. g: 15%, 50% etc.)

– with separate module for monitoring individual light fittings



Wiring diagram maintained/stand by operation



Installation: connect battery conductor

Decommission: disconnect battery conductor

Stand-by operation: do not connect L1'

Product highlights:

- always ready for operation due to permanent trickle charging of the battery (MA-versions)
- safety, 100 % luminous flux at low ambient temperatures (MA-versions)
- Central battery versions with 100% luminous flux in case of emergency (ZB-versions)
- homogeneous illumination by using the new, frosted diffusers, no individual light points visible, comfortable perception of light, brilliant glare limitation
- high colour reproduction $R_a > 80$, according to the workplace guide lines suitable for nearly all plant locations
- reliable protection against contact due to additional clear cover (MA-versions)
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W] (incl. battery charge)	Luminous flux [lm]	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Operating hours 1h	Operating hours 3h	Substitute for *	Weight [kg] (without packing material)
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163 ..G2/. MA



with self-contained battery and automatic self-monitoring

16307 0031	163 12L22G2/1 MA	17	2.320	810	137	•		1 x 36W	2,6
16307 0032	163 15L34G2/1 MA	23	3.330	830	145	•		1 x 58W	3,0
16307 0033	163 12L42G2/1 MA	29	4.110	810	142	•		2 x 36W	2,6
16307 0034	163 15L60G2/1 MA	41	5.970	830	146	•		2 x 58W	3,0
16307 0035	163 15L34G2/3 MA	24	3.330	830	139		•	1 x 58W	3,4
16307 0036	163 15L60G2/3 MA	42	5.970	830	142		•	2 x 58W	3,4

163 ..G2 ZB



for central battery systems

Applications:

For connection to group or central battery systems or to an emergency mains for illuminating escape routes.

We recommend Central Battery Systems from **INOTEC**.

Technical Data:

Light fitting with incorporated fuse for cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.

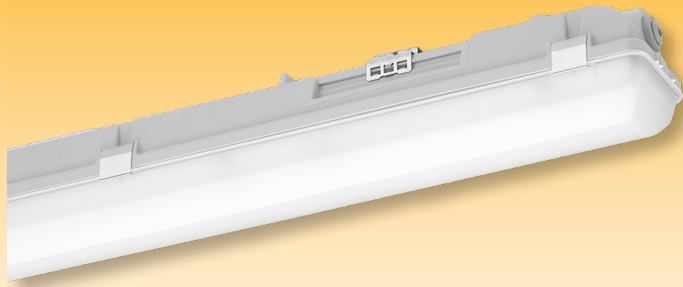
Connection voltage: 220-240V, 50/60Hz and 220V DC

Ambient temperature: from -20°C to +40°C

16307 0121	163 12L22G2 ZB	17	2.470	2.470	145			1 x 36W	2,2
16307 0122	163 15L34G2 ZB	22	3.370	3.370	153			1 x 58W	2,8
16307 0123	163 12L42G2 ZB	28	4.160	4.160	149			2 x 36W	2,2
16307 0124	163 15L60G2 ZB	40	6.090	6.090	152			2 x 58W	2,8

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series **163/164.. LED**“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.



LUXANO 2

Dustproof/Waterproof LED Emergency Light Fitting with Diffuser Series 167 ... G2 / 167... G2 VARIO

Applications:

Humid, wet, dusty rooms in workshops, industries, car parks etc. for lighting escape route.

Design:

Housing: Glass fibre reinforced polyester resin, foamed polyurethane gasket.

Diffuser: PMMA frosted for glare

limitation, additional clear cover at the LED-modules to ensure contact protection against contact (Types ... MA).

Closures: stainless steel, in order to

ensure the contact protection. The light fitting can be opened with a tool only.

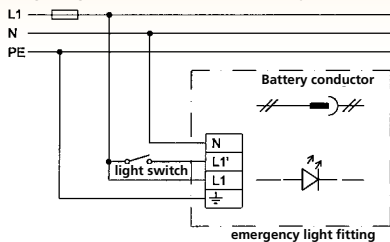
Reflector: Aluminium, painted, detachable carrying the electrical components.

Connection: 3/4-pole terminal.

Cable entries: Variable, closed knock-outs on the short and long sides, and on the top, 2 blanking plugs M20.

Mounting system: 2 reinforced retaining clips (also suitable for horizontal wall mounting), made of stainless steel, 2 brackets for chain suspension (included).

Wiring diagram maintained/stand by operation



Installation: connect battery conductor
Decommission: disconnect battery conductor
Stand-by operation: do not connect L1'

Technical data:

LED: Linear modules 4.000K, $R_a > 80$, service life $L_{80} > 50.000h$ at max. ambient temperature

Self contained NiMH battery, electronic charger, short circuit protected battery and reverse battery protection

Electronic deep discharge protection acc. to EN 61347-2-7

Re-charging time: 24h, acc. to EN 60598-2-22

Automatic monitoring according to EN 62034. Indication of the test results by 2-coloured LED (luminescence diode) at the luminaire.

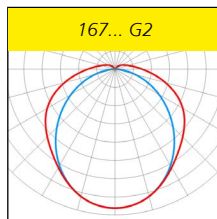
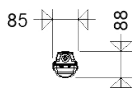
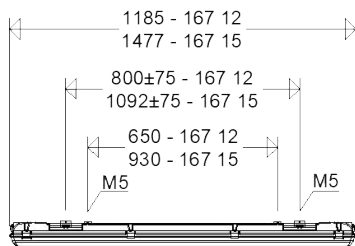
Mode of operation:

maintained operation = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

Stand-by operation: Emergency light switches on in the event of a power failure.

Connection voltage: 220-240V 50/60Hz

Ambient temperature: 0°C up to +30°C



Options:

- according to „International Featured Standard Food“ (IFS)
- with dimming function via DALI2 interface, compatible with LIMAS Line (DIMD) Light Management System

For versions with self-contained battery:

- Emergency lighting unit with DALI interface for central monitoring, compatible with LIMAS Line PRO or Line ESC (MA-Z) Light Management System
- through-wiring
- 4-conductor: L1, L1', N, PE or
- 6-conductor: L1, L1', L2', L3', N, PE

For versions with central battery system:

- with quick connector Fast Connect (FC)
- with with reduced luminous flux in DC mode (e. g. 15%, 50% etc.)
- with separate module for monitoring individual light fittings

Product highlights:

- always ready for operation due to permanent trickle charging of the battery (MA-versions)
- safety in an emergency, immediate light with maximum luminous flux even at low temperatures (MA versions)
- 100 % light output even in emergency mode (ZB-versions)
- homogeneous illumination by using frosted diffusers, no individual light spots visible, comfortable perception of light and excellent glare limitation
- high colour reproduction $R_a > 80$, according to the workplace guide lines suitable for nearly all plant locations
- reliable protection against contact due to additional clear cover (MA-versions)
- Closures made of stainless steel
- variable cable entries, closed knock-outs on the short and long sides, and on the back
- FastFix quick mounting system, with retaining clips made of stainless steel for variable mounting distances, without opening the fitting
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

Product highlights of the VARIO version:

- universally usable due to variable setting of the luminous flux, depending on the requirement
- simple and quick adjustment on-site without tools
- can be changed at any time (e.g. change of use of the premises with new requirements in regard to the level of illumination)
- great versatility, thus economical storage due to standardization (only one light fitting instead of multiple versions)

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Quantity of ECG	Connected load [W] (incl. battery charge)	Luminous flux [lm] ¹⁾	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Operating hours 1h	Operating hours 3h	Substitute for *	Weight [kg] (without packing material)
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167 ..G2/. MA



with self-contained battery and automatic self-monitoring

16703 0021	167 15L34G2/1 MA	1	29	3.710	810	128	•	1 x 58W	2,5
16703 0022	167 12L42G2/1 MA	1	32	4.250	810	133	•	2 x 36W	2,2
16703 0023	167 15L60G2/1 MA	1	44	6.000	810	136	•	2 x 58W	2,7
16703 0024	167 15L34G2/3 MA	1	29	3.710	810	128		1 x 58W	2,8
16703 0025	167 15L60G2/3 MA	1	44	6.000	810	136		2 x 58W	2,8

NEW

167 ..G2 VARIO ZB



for central battery systems - with variable setting of the luminous flux

Applications:

For connection to group or central battery systems or to an emergency mains for illuminating escape routes.

We recommend Central Battery Systems from INOTEC.

Design:

As standard version 167... G2, but with DIP switch for

setting the luminous flux without tools. The luminaire luminous flux can be set to four values. Depending on the set luminous flux, the power consumption of the light fitting and the maximum permissible ambient temperature change.

Mounting system: 2 reinforced retaining clips made of stainless steel, 2 bracket for chain suspension (included).

Technical Data:

Light fitting with incorporated fuse for cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.

Connection voltage: 220-240V, 50/60Hz and 220V DC

Ambient temperature: from -20°C to +35°C

Notes:

In case of horizontal installation, the light fitting must be directly fixed with screws (washer and pressure disk are included) or it must be mounted with a reinforced retaining clips (see accessories)!

16703 0120	167 12LG2 VARIO ZB	1	18	2.700	2.700	150		> 1 x 36W	1,7
			21	3.100	3.100	148		< 1 x 58W	
			26	3.800	3.800	146		> 1 x 58W	
			30	4.300 ²⁾	4.300	143		2 x 36W	
16703 0121	167 15LG2 VARIO ZB	1	25	3.800	3.800	152		> 1 x 58W	1,9
			29	4.400	4.400	152		2 x 36W	
			36	5.400	5.400	150		< 2 x 58W	
			43	6.200 ²⁾	6.200	144		2 x 58W	

1) possible setting range
2) Factory setting

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Accessories / Spare Parts

Article no.	Type	
spare glasses, PMMA, frosted		
16711 9003	ABD 167 12 G2	PMMA for 167 12L.. G2
16711 9004	ABD 167 15 G2	PMMA for 167 15L.. G2
Fasteners		
90123 9008	167G2 KE V10	stainless steel (packing unit 10)
Cable entries		
90063 9000	2511	blinking plug M20
Accessories		
90049 0004	167 VBC P	retaining clips, reinforced for horizontal wall mount (1 pair)

Compact LED Emergency/Escape Sign Light Fitting Series 164KL ...



Applications:

In humid, wet and dusty locations for illuminating and indicating any escape routes.

Design:

Housing: Glass fibre reinforced polyester, silicone gasket.
Diffuser: PMMA frosted for glare limitation, version ... L02 opalescent white (W).
(Pictograms – if required – to be orde-

red separately, see accessories).

Clips: Single-piece plastic clips (KK).

Reflector: Painted aluminium, can be suspended or removed and carries the electrical component.

Connection terminal: 3 or 4 poles.

Cable entries: Variable, on the short sides and on the top, 2 plugs M20.

Mounting: 2 mounting points, rubber gasket and washers included.

Technical Data:

LED: Linear module 4.000K or 6.500K (Versions ... L02W), $R_a > 80$, service life $L_{80} > 50.000h$ at max. ambient temperature

Battery NiMH (versions ... L02/. W) or NiCd (versions ... L08/.), a constant trickle charge to the battery ensures readiness of operation at all times.

Electronic deep discharge protection according to EN 61347-2-7

Charging period 24h according EN 60598-2-22.

Automatic monitoring of the fitting according to EN 62034. Test results indicated by 2 colour LED.

Operating modes:

Maintained Mode: Switch over to battery back up in case of mains fail.

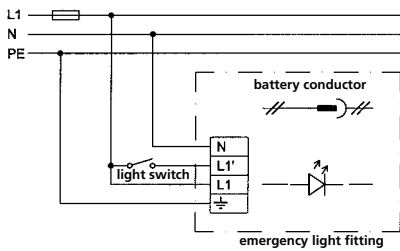
Version ... L08/. will operate at a reduced luminous flux.

Stand-by operation: Emergency light switches on in the event of a power failure.

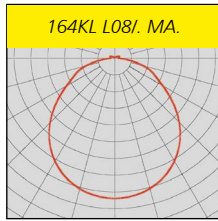
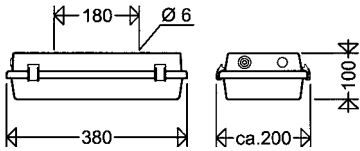
Operating voltage: 220-240V; 50/60Hz

Ambient temperature: 0 to +30°C in maintained mode
 0 to +40°C in stand-by mode

Wiring diagram maintained/stand by operation



Installation: connect battery conductor
Decommission: disconnect battery conductor
Stand-by operation: do not connect L1'



Options:

- stainless steel clips (KE)
- Cable entries to M25x1.5
- same side in/out wiring

For series with self-contained battery:

- Emergency lighting unit with DALI interface for central monitoring, compatible with LIMAS Line PRO or Line ESC (MA-Z) Light Management System

For series in case of connection to central power supply unit:

- with integrated LED supply- and monitoring module for monitoring individual light fittings connected to group- or central battery systems. We recommend systems of make INOTEC.

Product highlights:

- always ready for operation due to permanent trickle charging of the battery (MA-versions)
- safety in case of an emergency, instant light with maximum light output also at low temperatures (MA-versions)
- Central battery versions with 100% luminous flux in case of emergency (WMA - and ZB-versions)
- constant light output at all specified ambient temperatures
- excellent illumination of the pictogram. According to EN 1838 and DIN 4844
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Connected load [W] (incl. battery charge)	Luminous flux [lm]	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Light fitting for pictogram	Operating hours 1h	Operating hours 3h	Substitute for *	Weight [kg] (without packing material)
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164KL .../. MA



with self-contained battery and automatic self-monitoring

16408 0060	164KL L02/1 W MA	5,0	270	270	54	•	•	---		1,1
16408 0061	164KL L02/3 W MA	5,0	270	270	54	•		•	---	1,6
16408 0041	164KL L08G2/1 MA	10,0	820	500	82		•		1 x 11W	1,3
16408 0042	164KL L08G2/3 MA	11,0	820	490	75			•	1 x 11W	1,7

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W] (incl. battery charge)	Luminous flux [lm]	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Light fitting for pictogram	Operating hours 1h	Operating hours 3h	Substitute for *	Weight [kg] (without packing material)
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164KL... ZB



for central battery systems

For connection to group or central battery systems or to an emergency mains for illuminating and indicating escape routes. We recommend Central Battery Systems from INOTEC.

Technical Data:

Light fitting with incorporated fuse for cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.

Connection voltage: 220-240V, 50/60Hz and 220V DC

Ambient temperature: -20°C to +30°C



Series 164KL... W with pictogram

16408 0045	164KL L02 W ZB	4,0	270	270	68	•			---	0,9
16408 0031	164KL L05G2 ZB	4,5	490	490	109				1 x 8W	1,0
16408 0032	164KL L08G2 ZB	8,5	840	840	99				1 x 11W	1,0
16408 0033	164KL L11G2 ZB	10,0	1.150	1.150	115				1 x 18W	1,0
16408 0034	164KL L15G2 ZB	14,0	1.490	1.490	106				1 x 24W	1,0

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Self-adhesive pictogram green/transparent



121/32



121/33



121/34



121/35



121/36



121/37



121/38



121/39

for light fittings with white opalescent glass windows for escape route signs acc. to DIN EN ISO 7010 und ASR A1.3.

Viewing distance = 30 m.

Accessories / Spare Parts

Article no.	Type	
Spare glasses		
16413 9001	ABD 164KL W	PMMA white opalescent for 164KL... W
16413 9007	ABD 164KL F G2	PMMA frosted for 164KL L.. G2
Brackets		
90232 0004	DA	ceiling bracket
Self-adhesive pictograms		
12112 0025	121/32	emergency EXIT „up“
12112 0026	121/33	emergency EXIT „left“
12112 0027	121/34	emergency EXIT „right“
12112 0028	121/35	emergency EXIT „below“
12112 0029	121/36	emergency EXIT „up-left“
12112 0030	121/37	emergency EXIT „up-right“
12112 0031	121/38	emergency EXIT „down-left“
12112 0032	121/39	emergency EXIT „down-right“

Further accessories and spare parts see section „Dustproof/Waterproof LED Light Fitting“ Series 164KL... in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.

Small Impact Resistant LED Emergency/Escape Sign Light Fitting Series 131 ... LED



Applications:

In humid, wet and dusty locations for illuminating and indicating the escape routes.

Design:

Housing: White polycarbonate.

Diffuser: Polycarbonate, ... L02 versions opalescent white (W). Hinged and detachable at one end and closed at the other end with captive stainless steel

screw. (Pictograms to be ordered separately see accessories)

Reflector: Aluminium white painted. Connection: 3- or 4-poles.

Cable entries: 1 blanking plug M20 at each end.

Mounting system: 2 holes for ceiling mounting. Sealing and pressure disks inside each fitting.

Technical data:

LED: Linear module 4.000K or 6.400K (Versions ... L02W), $R_a > 80$, service life $L_{80} > 50.000h$ at max. ambient temperature

NiMH battery mounted on the reflector. A constant trickle charge to the battery ensures readiness of operation at all times.

Electronic deep discharge protection acc. to EN 61347-2-7

Recharging time: 24 h, acc. to EN 60598-2-22.

Automatic monitoring the emergency light fitting acc. to EN 62034. Indication of the test results by 2-colour LED on the light fitting.

Modes of operation:

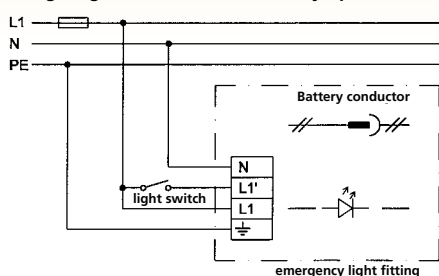
Maintained operation: Switch over to battery operation in case of mains failure.

Stand-by operation: Emergency light switches on in the event of a power failure.

Connection voltage: 220-240V, 50/60Hz

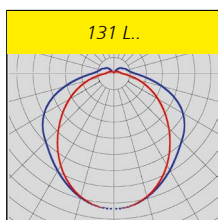
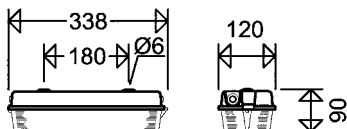
Ambient temperatures: 0°C up to +30°C for maintained version
0°C up to +40°C for stand-by version

Wiring diagram maintained/stand by operation



Installation: connect battery conductor
Decommission: disconnect battery conductor
Stand-by operation: do not connect L1'

series 131...



Options:

For series with self-contained battery:

– Emergency lighting unit with DALI interface for central monitoring, compatible with LIMAS Line PRO or Line ESC (MA-Z) Light Management System

For series in case of connection to a central power:

– with separate LED supply- and monitoring module for monitoring individual light fittings connected to group- or central battery systems. We recommend Central Battery Systems from INOTEC.

Product highlights:

- robust, impact resistant compact light fitting (entirely made from PC)
- best suitable in the food industry and in the food processing industry especially in risky areas falling under the IFS standards (International Featured Standard Food)
- safety in an emergency, immediate full light (100% luminous flux) even at low temperatures
- stable luminous flux in the emergency operation independent from the ambient temperature
- always ready for operation due to permanent trickle charging of the battery (MA-versions)
- outstanding even illumination of the pictogram, fulfills EN 1838 and DIN 4844
- reduced battery capacity (MA-versions)
- little thermal stress
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard



! Properties, limitations and details for controlling LED-light fittings:

■ See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W] (incl. battery charge)	Luminous flux [lm]	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Light fitting for pictogram	Operating hours 1h	Operating hours 3h	Substitute for *	Weight [kg] (without packing material)
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131 ... / . W MA



with self-contained battery and automatic self-monitoring

13112 0030	131 L02/1 W MA	5,0	240	240	48	•	•		---	1,0
13112 0031	131 L02/3 W MA	5,0	240	240	48	•		•	---	1,2
13112 0110	131 L03/1 MA	5,0	300	300	60		•		1 x 8W	1,0
13112 0111	131 L03/3 MA	5,0	300	300	60			•	1 x 8W	1,2

131 ... ZB



for connection to central power supply unit

For connection to group or central battery systems or to an emergency mains for illuminating and indicating escape routes. We recommend Central Battery Systems from INOTEC.

Technical data:

Light fitting with incorporated fuse for cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.

Connection voltage: 220-240V, 50/60Hz and 220V DC

Ambient temperature: -20°C to +30°C

13112 0010	131 L02 W ZB	4,0	240	240	60	•			---	0,4
13112 0011	131 L04 ZB	4,0	460	460	115				1 x 8W	0,5
13112 0012	131 L07 ZB	8,0	780	780	98				1 x 11W	0,5
13112 0013	131 L10 ZB	10,0	1.050	1.050	105				1 x 18W	0,5
13112 0014	131 L13 ZB	13,0	1.370	1.370	105				2 x 11W	0,5

* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

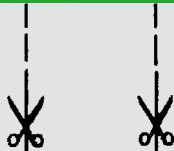


Series 131... W LED with pictogram

Self-adhesive pictogram

for identification of escape routes according to DIN EN ISO 7010 und ASR A1.3.

Viewing = 15m.



Accessories / Spare Parts

Article no.	Type	
Spare glasses		
13111 9001	ABD 131 W	PC opalescent white for 131... W
13111 9006	ABD 131 F	PC frosted for 131 L...
Standard pictogram, self-adhesive		
90011 0002	265/76/3	for 131... W

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series 130/131 ... LED“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.



Compact Emergency and Escape Sign Light Fitting with Highpower-LED Series 3611 ...

Applications:

Humid, wet and dusty locations in the trade, commerce and industry for emergency lighting as well as for illuminating and indicating any escape routes.

Design:

Housing: Die cast aluminium, white. All electrical components located inside the housing, wired ready for connection.

Cover: PC frosted, silicone gasket. As

indication sign light fitting with white opalescent PC glass (W) and pictogram. (Please order separately, see „Spare parts“).

Connection terminal: 3 or 4 poles.

Cable entry: 1 plug M20 on the front side.

Mounting: 2 outer fastening points.

Technical data:

LED: Linear module 4.000K or 6.400K (Versions ... L02W), $R_a > 80$,

service life $L_{80} > 60.000h$ at 25°C ambient temperature,

service life $L_{80} > 50.000h$ at max. ambient temperature

Built-in NiMH battery: A constant trickle charge to the battery ensures readiness of operation at all times.

Electronic deep discharge protection acc. to EN 61347-2-7

Recharging time: 24 hours, acc. to EN 60598-2-22.

Automatic monitoring of the emergency light fitting acc. to EN 62034. The test results are indicated by a two-colour LED on the fitting.

Modes of operation:

Stand-by operation: Emergency light switches on in case of mains failure

Maintained operation: Switching over to battery operation in case of mains failure

Voltage: 220-240V, 50/60Hz.

Ambient temperature: 0°C up to +30°C in stand-by operation

0°C up to +40°C in maintained operation

Options:

– same side in/out wiring

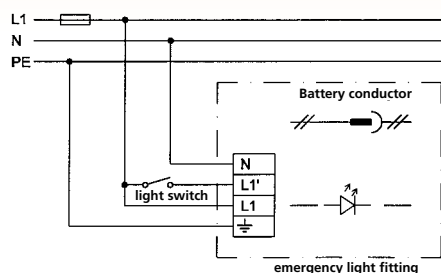
For series with self-contained battery:

– Emergency lighting unit with DALI interface for central monitoring, compatible with LIMAS Line PRO or Line ESC (MA-Z) Light Management System

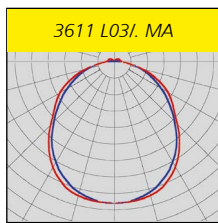
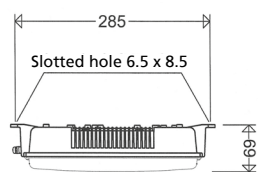
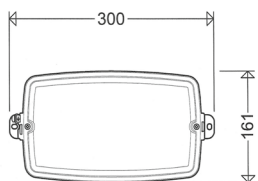
For series in case of connection to a central power supply unit:

– with integrated LED supply- and monitoring module for monitoring individual light fittings connected to group- or central battery systems. We recommend Central Battery Systems from INOTEC.

Wiring diagram maintained/stand by operation



Installation: connect battery conductor
Decommission: disconnect battery conductor
Stand-by operation: do not connect L1'



Product highlights:

- robust light fitting for rough environments
- best suitable in the food industry and in the food processing industry especially in risky areas falling under the IFS standards (International Featured Standard Food)
- safety in an emergency, immediate full light (100% luminous flux) even at low temperatures
- stable luminous flux in the emergency operation independent from the ambient temperature
- always ready for operation due to permanent trickle charging of the battery (MA-versions)
- outstanding even illumination of the pictogram, fullfills EN 1838 and DIN 4844
- easy to install due to external mounting lugs
- sustainable, control gear and LED-module replaceable by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Connected load [W] (incl. battery charge)	Luminous flux [lm]	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Light fitting for pictogram	Operating hours 1h	Operating hours 3h	Weight [kg] (without packing material)
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3611 .../. MA



with incorporated battery set and monitoring system

36111 0050	3611 L02/1 W MA	5,0	170	170	34	•	•		1,0
36111 0051	3611 L02/3 W MA	5,0	170	170	34	•		•	1,2
36111 0033	3611 L03/1 MA	5,0	290	290	58		•		1,0
36111 0034	3611 L03/3 MA	5,0	290	290	58			•	1,2

Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

All data are correct at the time of printing. Actual technical data can be found under www.schuch.de.

Article no.	Type	Connected load [W] (incl. battery charge)	Luminous flux [lm]	Luminous flux [lm] (emergency operation)	Luminous efficacy [lm/W]	Light fitting for pictogram	Operating hours 1h	Operating hours 3h	Weight [kg] (without packing material)
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3611... ZB



for connection to central power supply unit

For connection to group or central battery systems or to an emergency mains for illuminating and indicating escape routes. We recommend Central Battery Systems from **INOTEC**.

Technical data:
 Light fitting with incorporated fuse for cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.
 Connection voltage: 220-240V, 50/60Hz and 220V DC
 Ambient temperature: -20°C to +30°C

36111 0030	3611 L02 W ZB	4,0	170	170	43	•			0,9
36111 0035	3611 L05 ZB	6,0	660	660	110				0,9
36111 0036	3611 L10 ZB	10,0	1.180	1.180	118				0,9



Type 3611 ... with pictogram

Self-adhesive pictogram
green / transparent



220/110/32



.../33



220/110/34



.../35

For light fittings with white opal glass.

For marking escape routes acc.to DIN EN ISO 7010 and ASR A1.3.

Viewing distance = 22m.

Accessories / Spare Parts

Article No.	Type	
spare diffusers		
36004 9003	ABD 3611 F	PC, frosted
36004 9002	ABD 3611 W	PC, white opalescent
Self adhesive legends		
12112 0100	220/110/32	Emergency exit upstairs
12112 0101	220/110/33	Emergency exit to the left
12112 0102	220/110/34	Emergency exit to the right
12112 0103	220/110/35	Emergency exit below

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series **3611 ... LED**“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.

SCHUCH - Technical Supplement

Table of Contents

1. Explosion-Protected lighting	285-288
1.1 Introduction	285
1.2 Legal basis	285
1.2.1 Directive 94/9/EC - 2014/34/EU	285
1.2.2 EC Directive 99/92/EC	285
1.3 Technical principles	285
1.3.1 Equipment groups	285
1.3.2 Zone classification (according to Directive 1999/92/EC)	285
1.3.3 Equipment categories	286
1.3.4 Temperature classes according to IEC 60079-0	286
1.3.5 Group II	286
1.3.6 Group III	286
1.3.7 Classification of flammable gases, mists, vapours	286
1.3.8 Combustible dusts	286
1.3.9 Types of protection	287
1.3.9.1 Flameproof enclosure „d“	287
1.3.9.2 Increased safety „e“	287
1.3.10 Marking	288
1.4 Special operating conditions	288
2. Marking	288
3. General	
3.1 Permissible ambient temperatures	
3.2 Rated voltage	
3.3 EMC	
4. Properties of LED luminaires	289-290
4.1 Rated values in the data sheets of LED luminaires	289
4.2 Service life data of LED luminaires	289
4.3 Switching resistance of LED luminaires	289
4.4 Use of LED luminaires in corrosive atmospheres	289
4.5 Use of LED luminaires in humid atmospheres	289
4.6 Mounting of LED outdoor luminaires of protection class II on mounting devices mounting devices that are electrically insulated from insulated from earth potential.	289
4.7 Overvoltage protection for LED outdoor luminaires	290
4.8 Restrictions in the operation of LED outdoor luminaires with power reduction	290
4.9 Inrush currents with LED luminaires - limited automatic capacity	290
4.10 Photobiological safety	290
4.11 Replacement of control gear and LED modules during repair of luminaires.	290
4.12 Light emissions (ULOR+ULR)	290
5. Control of lighting systems, dimming and power reduction	290-293
5.1 DIMA (analogue dimming)	290
5.2 DIMD (Digital dimming and control with DALI)	290
5.3 DIMC (Corridor function with control phase)	291
5.4 LR (power reduction with control phase) for outdoor luminaires	291
5.5 LA (self-sufficient power reduction without control phase) with outdoor luminaires	291
5.6 CL (constant luminous flux function)	292
5.7 MA-Z (central monitoring of single-battery luminaires via DALI line)	292
5.8 DIMD MA-Z (central control and monitoring of single-battery luminaires with DALI line) single-battery luminaires with DALI-2 ECG)	292
5.9 DI (central monitoring of Ex single-battery luminaires via DALI line)	292
5.10 DIMDI (central control and monitoring of single-battery luminaires) EX single-battery luminaires with DALI-2 ECG)	292

5.11 RFL (luminaire with Zhaga Book 18 base(s), prepared for light control)	292
5.12 Light Management System (LMS)	292
5.13 Other dimming functions	292
5.14 Restrictions on the use of radar sensors	292
5.15 Restrictions on the use of infrared sensors	292
6. Safety classification for luminaires	293
6.1 Degrees of protection to DIN VDE 0711/EN 60598/IEC 598	293
6.2 Protection classes	293
7. Areas of application and properties of SCHUCH luminaires	293
7.1 Use of moisture-proof luminaires taking into account their degree of protection	293
7.2 „F“ mark	293
7.3 Luminaires with limited surface temperature „D“ symbol	293
7.4 Frameless luminaires made of toughened safety glass	294
7.5 Use of luminaires in animal husbandry	294
7.6 PC cover glasses	294
8. Emergency lighting	294-295
8.1 Classification and terms	294
8.2 Occupational safety	294
8.3 Electrical requirements	294
8.4 Lighting requirements	294
8.5 Use of luminaires in emergency lighting systems for central battery operation (CB)	295
8.6 Individual monitoring of LED luminaires in emergency lighting systems with central battery operation	295
8.7 Individual monitoring of LED individual battery luminaires	295
8.8 Conversion of general lighting luminaires to emergency luminaires	295
9. Plastics in SCHUCH luminaires	295
9.1 Chemical resistance	295
10. Corrosion resistance of sheet steel luminaires	296
11. Glare rating in industrial lighting	296

The technical appendix provides information and notes that are important for the planning, installation and operation of lighting systems with SCHUCH Light Fittings.

1. Explosion-Protected lighting

1.1 Introduction

Luminaires may only be brought into areas with explosive atmospheres if they do not constitute a source of ignition for these explosive atmospheres. An explosion is defined as an oxidation or decomposition reaction that takes place at a high reaction rate and produces an increase in temperature or pressure or both at the same time. It involves reactions of flammable gases, mists and vapours or dusts and combustible flyings with the oxygen in the air.

Possible hazardous areas are, for example, in chemical factories, refineries, paint factories, paint shops, cleaning plants, mills and storage facilities for ground products, tank and loading facilities for flammable gases, liquids and solids.

1.2 Legal basis

Electrical installations and equipment in potentially explosive atmospheres are subject to special directives and regulations.

1.2.1 Directive 94/9/EC - 2014/34/EU

For the CENELEC (European Committee for Electrotechnical Standardization) area, Directive 94/9/EC (commonly referred to as ATEX 95, formerly ATEX 100a) of the European Parliament and Council of 23 March 1994 is of fundamental importance. ATEX means: Atmosphères Explosibles, i.e. explosive atmospheres.

The directive is primarily addressed to the manufacturers of explosion-protected equipment.

The harmonised standards of the EN 60079 ff series describe the different types of protection. Conformity with the requirements of the Directive is demonstrated for electrical equipment in categories 1 and 2 by the EU type examination certificate. For category 3 equipment, the manufacturer declares conformity with the requirements of the Directive on his own responsibility and issues an EU declaration of conformity or, for components, an attestation of conformity. The EU type examination certificate can be issued by a German authority, e.g. the Physikalisch Technische Bundesanstalt in Braunschweig (PTB, Notified Body No. 0102) as well as by another Notified Body.

On 29 March 2014, the new version of the ATEX Directive 2014/34/EU was published in the Official Journal of the European Union. The new directive has been in force since 20 April 2016. There are no fundamental improvements for manufacturers and designers. Mainly adaptations to the New Legislative Framework (NLF) are made. Old certificates according to Directive 94/9/EC remain valid.

1.2.2 EC Directive 1999/92/EC

EC Directive 1999/92/EC is generally known as ATEX 137 (formerly ATEX 118a) and is aimed primarily at the operators of installations with potentially explosive atmospheres. In Germany it was transposed into national law on 27 September 2002 as the „Ordinance on the Simplification of Legislation in the Field of Safety and Health Protection in the Provision of Work Equipment and its Use at Work, Safety in the Operation of Installations Requiring Monitoring and the Organisation of Occupational Health and Safety“ (Betriebssicherheitsverordnung - Betr.SichV, 27 Sept. 2002 BGBl, I p.2777).

1.3 Technical principles

An explosive atmosphere is a mixture of air and flammable gases, vapours, mists or dusts and combustible flyings under atmospheric conditions in which, after ignition has occurred, the combustion process is transferred to the entire unburned mixture. In a potentially explosive atmosphere, the atmosphere may become explosive due to local and operational conditions.

In EU Directive 2014/34/EU, electrical equipment for potentially explosive atmospheres is divided into groups, categories and temperature classes. This is necessary because the same requirements do not have to be placed on the equipment for every application and for every hazard level, which would also not make economic sense.

Electrical equipment for installations in potentially explosive atmospheres is generally designed for an ambient temperature range of -20°C to +40°C, unless an additional temperature specification extends or restricts this.

1.3.1 Equipment groups

A distinction is made between two equipment groups:

Equipment group I applies to equipment for use in underground operations of mines and their surface installations which may be endangered by firedamp and/or combustible dust.

Equipment group II applies to equipment for use in other areas which may be endangered by an explosive atmosphere.

1.3.2 Zone classification (according to Directive 1999/92/EC)

Potentially explosive atmospheres are classified into the following zones according to the likelihood of explosive atmospheres occurring:

Gases, vapours or mists

Zone 0 An area in which an explosive atmosphere is present either **continuously** or over **long periods** of time or **frequently** as a mixture of air and combustible gases, vapours or mists.

Zone 1 An area where under normal operating conditions an explosive atmosphere may **occasionally** be present as a mixture of air and combustible gases, vapours or mists.

Zone 2 An area where an explosive atmosphere is not likely to be present under normal operation but if it should occur for some reason it would normally only exist for a **short period** as a mixture of air and combustible gases, vapours or mists.

Dusts

Zone 20 An area in which an explosive atmosphere is present either **continuously** or over **long periods** or **frequently** as a cloud of combustible dust in the air.

Zone 21 An area where under normal operating conditions an explosive atmosphere may **occasionally** be present as a cloud of combustible dust in the air.

Zone 22 An area where an explosive atmosphere is not likely to be present under normal operation but if it should occur for some reason it would normally only exist for a **short period** as a cloud of combustible dust in the air.

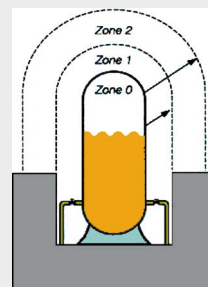


Illustration 1 and Illustration 2 show typical examples for the Zoning for flammable liquids

Illustration 1: Storage of flammable liquids

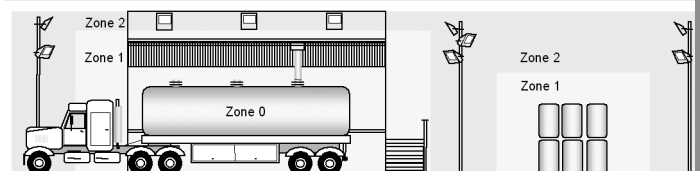


Illustration 2: Filling and storage of flammable liquids

1.3.3 Equipment categories

Acc. to the ATEX standards (2014/34/EU) the appliances for application in their relative zones are classified into categories. Similar to the different zones there are three different categories for group II equipment. Consequently, the explosion protected products can be allocated to the ex-zones existing in the production area.

Category 1 comprises appliances which have been designed in such a way that they may be operated in compliance with the characteristic parameters given by the manufacturer and which ensure a **very high level of safety**. Appliances of this category may be used in ZONES 0 and 20 as per their certification.

Category 2 comprises appliances which have been designed in such a way that they may be operated in compliance with the characteristic parameters given by the manufacturer and which ensure a **high level of safety**. Appliances of this category may be used in ZONES 1 and 21 as per their certification.

Category 3 comprises appliances which have been designed in such a way that they can be operated in compliance with the characteristic parameters given by the manufacturer and which ensure a **normal level of safety**. Appliances of this category may be used in ZONES 2 and 22.

Table 1 shows the relationship between zoning and equipment category.

Zone	Explosive Atmosphere	Category according to 2014/34/EU
Zone 0 Zone 20	continuously, long periods or frequently	Category 1
Zone 1 Zone 21	occasionally	Category 2
Zone 2 Zone 22	infrequently and short periods	Category 3

Table 1: Zoning - Equipment category

1.3.4 Temperature classes acc. to IEC 60079-0

An important parameter for the classification of gases is the ignition temperature. The ignition temperature is the lowest temperature value of a hot surface at which an explosive atmosphere ignites on it. This maximum surface temperature must always be lower than the ignition temperature of the gas, mist or vapour/air mixture in which it is used. Table 2 shows the temperature classes according to IEC 60079-0.

Temperature classification	Maximum permissible surface temperatures of equipment [°C]	Ignition temperatures of inflammable substances [°C]
T1	450	> 450
T2	300	> 300 ≤ 450
T3	200	> 200 ≤ 300
T4	135	> 135 ≤ 200
T5	100	> 100 ≤ 135
T6	85	> 85 ≤ 100

Table 2: Temperature classes

1.3.5 Group II

EN ISO/IEC 80079-20-1 „Material characteristics for gas and vapour classification“ describes a method for determining the maximum experimental safe gap MESG. The maximum gap width is of considerable importance for the type of protection flameproof enclosure „d“. Table 3 shows the maximum gap widths of group II for

Group	Gap width M E S G
IIA	> 0,9mm
IIB	≥ 0,5 bis ≤ 0,9mm
IIC	< 0,5mm

a volume of 20ml according to EN ISO/IEC 80079-20-1, gap length 25mm.
Table 3: Group/maximum gap width (according to EN ISO/IEC 80079-20-1 with 25mm gap length volume 20 ml)

1.3.6 Group III

Combustible solid particles in form of dust or flyings can explode in combination with air and an ignition source. The type of substance is decisive for the selection of equipment. Combustible solid particles are divided into subgroups according to their properties, see Table 4.

Group	
IIIA	combustible flyings
IIB	non-conductive dusts: Specific electrical resistance > 1 kΩ m
IIC	conductive dusts: Specific electrical resistance ≤ 1 kΩ m

Table 4: Classification of flammable solid particles into sub-groups (according to the test method in EN ISO/IEC 80079-20-2)

1.3.7 Classification of flammable gases, mists, vapours

Table 5 shows the classification of gases, mists and vapours into groups and temperature classes.

Explosion group	Classification of gases and vapours into temperature classes					
	T1	T2	T3	T4	T5	T6
IIA	Acetone Ethane Ethyl acetate Ammonia Ethyl chloride Benzol Acetic acid Carbon monoxide Methanol Methyl chloride Naphthalene Phenol Propane Toluol	i-amyl acetate n-butane n-butyl alcohol Cyclohexane 1,2-dichloroethane Acetic anhydride	Gasoline Diesel fuel Aviation fuel Heating oils n-hexane	Acetaldehyde	-	
IIB	Town gas	Ethylene Ethyl alcohol	Hydrogen sulphide	Ethyl ether	-	
IIC	Hydrogen	Acetylene			-	Carbon disphide
I	Methane					

Table 5: Classification of flammable gases, mists and vapours

1.3.8 Combustible dusts

Similar to gases, mists and vapours, all combustible dusts and flyings (fibres that have become detached from fabrics or similar materials and are caught, for example, in the lint filter of a clothes dryer) can also react explosively under certain conditions. Possible ignition sources are electric sparks, hot surfaces, electrostatic charges etc. To exclude these ignition sources for the dust atmosphere, special types of ignition protection are used, such as „encapsulation“, „pressurised enclosure“ or „protection by enclosure“.

With the „protection by enclosure“ type of protection, dust and flyings are prevented from entering the luminaire by a dust-protected or dust-tight housing.

Dust or flyings can ignite on the outer surfaces of a luminaire. In this case, the surface temperature is the ignition source.

The highest occurring temperature of the luminaire surface with which combustible dust or flyings can come into contact must be noted as the maximum surface temperature on the type plate.

The properties of dust or flyings for explosion protection in luminaires are mainly de-

scribed by two parameters, the **minimum ignition temperature of a dust cloud (MIT_C)** and the **minimum ignition temperature of a dust layer (MIT_L)**. The **layer ignition temperature** is the temperature of a hot surface on which a layer of dust 5 mm thick begins to glow.

The **minimum ignition temperature** is the lowest temperature at which a dust cloud can ignite on brief contact with a heated wall.

If the minimum ignition temperature of the combustible dust that occurs is known, the maximum surface temperature of the luminaire can be used to decide on the particular application.

It is important to keep a safety margin between these two values. The lower of the two values is decisive.

The surface temperature of the equipment must be at least 75 K below the layer ignition temperature and must not be greater than 2/3 of the ignition temperature of the dust cloud. An example for hard coal:

$$MIT_C = 590^\circ\text{C} \text{ (minus } 1/3 \text{ MIT}_C = 394^\circ\text{C)}$$

$$MIT_L = 245^\circ\text{C} \text{ (minus } 75 \text{ K} = 170^\circ\text{C)}$$

-> max. permissible surface temperature with a dust layer of max. 5 mm: 170°C

Depending on the height of the dust accumulating on the luminaire, the maximum permissible surface temperature is reduced. A diagram for this can be found in the EN 60079-14 standard, where further information can also be found. For the example given above, this means that with coal dust and a layer thickness of 50mm, the maximum surface temperature of the equipment must not exceed 80°C, i.e. the layer ignition temperature is 80°C with the appropriate safety margin.

A typical luminaire for areas susceptible to dust is shown in **Fig. 3**.



Fig. 3: Explosion-protected luminaire e865 for dust-hazardous areas of zone 21 in type of protection: protection by enclosure „t“.

1.3.9 Types of Protection

In areas where it is not possible to prevent the presence of a hazardous explosive atmosphere (primary explosion protection), only explosion-protected equipment may be used. The design measures required for this are described in the types of protection.

Luminaires are generally built with type of protection flameproof enclosure „d“ or increased safety „e“.

EN 60079-7	- stands for: „ Increased safety “	- code: „ e “
EN 60079-1	- stands for: „ Flameproof enclosure “	- code: „ d “
EN 60079-5	- stands for: „ Powder filling “	- code: „ q “
EN 60079-2	- stands for: „ Pressurised apparatus “	- code: „ p “
EN 60079-11	- stands for: „ Intrinsic safety “	- code: „ i “
EN 60079-18	- stands for: „ Encapsulation “	- code: „ m “
EN 60079-31	- stands for: „ Protection by enclosure “	- code: „ t “
EN 60079-15	- stands for: „ Zone 2 “	- code: „ n “
EN 60079-28	- stands for: „ Limitation of optical radiation “	- code: „ op is “

Analogous to the degree of protection of the equipment category (according to Directive 2014/34/EU) or the equipment protection levels EPL (according to IEC 60079-0), some types of protection are subdivided into levels of protection, e.g. the type of protection encapsulation in ma (use in Zone 0, 1, 2 or 20, 21, 22); mb (use in Zone 1, 2 or 21, 22) and mc (use in Zone 2 or 22), and the type of protection increased safety in eb (use in Zone 1, 2) and ec (use in Zone 2).

1.3.9.1 Flameproof enclosure „d“

The type of protection flameproof enclosure „d“ is used for luminaires for use in Zone 1 mainly where ignition sources such as electric sparks and hot surfaces do not permit the use of the light source in luminaires of the type of protection increased

safety. This is the case, for example, with LEDs.

The parts of an item of electrical equipment that can ignite a potentially explosive atmosphere are enclosed in a housing with this type of protection. The explosive mixture can penetrate the enclosure. In the event of an explosion of this mixture inside, the enclosure must withstand this pressure and prevent the transmission of the explosion to the explosive atmosphere surrounding the enclosure.

The fundamental difference to the type of protection increased safety „e“ is that in the case of the type of protection „increased safety“, the occurrence of ignition sources that can trigger an explosion is prevented. With flameproof enclosure „d“, an explosion may occur inside the enclosure, but its transmission to the outside is prevented.

1.3.9.2 Increased safety „e“

The principle of this type of protection is to prevent sources of ignition from the equipment, i.e. measures are taken to prevent, with an increased level of safety, the possibility of e.g. impermissibly high temperatures and the occurrence of sparks or arcs inside or on external parts of electrical equipment. The type of protection is applicable to electrical equipment and parts thereof which do not produce sparks or assume dangerous temperatures under normal operating conditions. The type of protection increased safety „e“ has become established worldwide for luminaires for fluorescent lamps, especially for economic reasons for use in Zone 1. LEDs must have an additional type of protection in order to be installed in luminaires for use in Zone 1, e.g. encapsulation.

Figs. 4 and 5 show special luminaires with type of protection increased safety „e“.

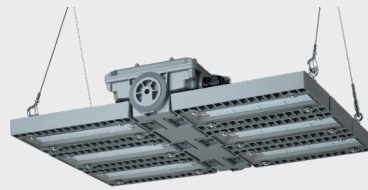


Fig. 4: Explosion-protected high-bay luminaire e8825 with type of protection: increased safety „e“



Figure 5: Explosion-protected floodlight e8820 in the type of protection: increased safety „e“

Fig. 6 and Fig. 7 show two typical luminaires with type of protection increased safety „e“. The advantage over luminaires in flameproof enclosure „d“ is the considerably lower weight and the simplified replacement of electronic components and easier maintenance. In terms of price, this luminaire also has advantages over the luminaire in flameproof enclosure „d“.



Fig. 6: Explosion-protected polyester diffuser luminaire e865 in type of protection increased safety „e“



Fig. 7: Explosion-protected steep roof luminaire e821 in the type of protection increased safety „e“

Figure 6 shows an Ex-protected LED diffuser luminaire for use in Zone 1 and Zone 21. The LED modules are manufactured with a special encapsulation. The following characteristic data apply:

Type of protection: eb

Explosion protection:

II 2 G Ex eb mb q IIC T4 Gb (Zone 1)

II 2 D Ex tb IIIC T80°C Db (Zone 21)

1.3.10 Marking

Fig. 8 shows the type plate of an explosion-protected LED luminaire in the type of protection increased safety „e” in which other types of protection also apply, in this case encapsulation „m” for the LED module and powder filling „q” in which the electronic ballast is designed and encapsulated.

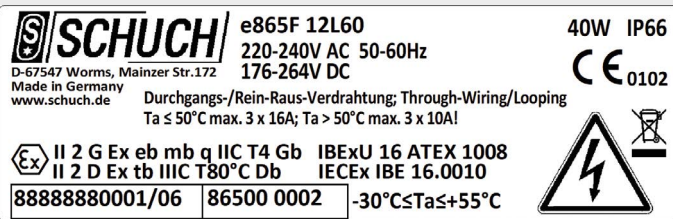
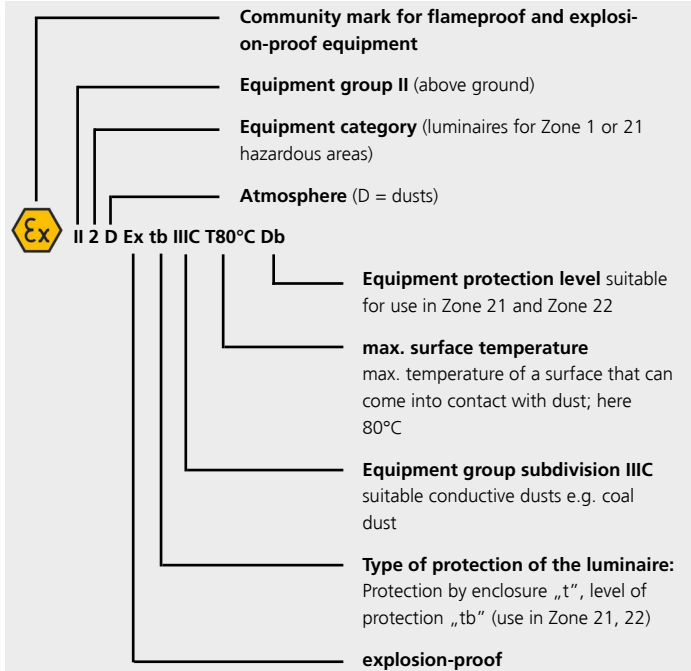
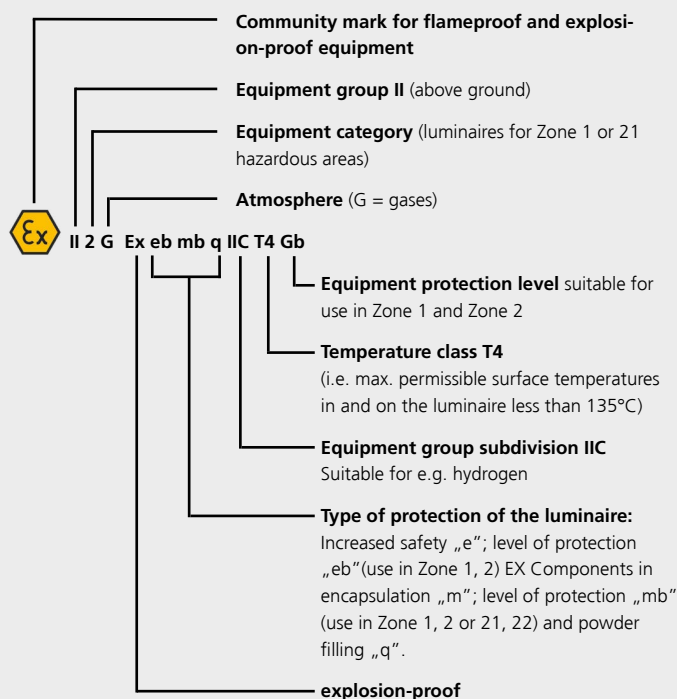


Figure 8: Example of marking of an explosion-protected luminaire



In addition, the following information is required:

$-30^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$ permissible operating temperature range if different from -20°C bis $+40^{\circ}\text{C}$

IBEXU Notified body (Institute for Safety Engineering)

CE 0102 CE -marking with the number of the Notified Body that monitors the QM system (0102 = Physikalisch Technische Bundesanstalt, PTB).

1.4 Special operating conditions

If the luminaire is subject to special operating conditions, such as chemical, mechanical, thermal, electrical, vibration, humidity, etc., this must be discussed in advance between the operator and the manufacturer so that additional measures can be taken if necessary. This is pointed out both by Directive 1999/92/EC and by the standard DIN EN 60079-14 or VDE 0165, which is authoritative for the operator of electrical equipment in potentially explosive atmospheres.

Ex luminaires usually have a high IP degree of protection, expressed e.g. by the marking „IP66”. However, this does not mean that the luminaire is hermetically sealed.

Luminaires are classified and tested in different degrees of protection according to the European standard EN 60529. This standard contains the German translation of the international standard IEC 60529 and is also a VDE regulation, as it has been approved by the VDE and classified under VDE 0470, Part 1.

In the current edition of this standard, a brief description and definition for the degrees of protection represented by the second code number is given in section 6.

For example, the short description for the second code number 6 is: „Protected against strong jets of water.” The definition given is: „Water splashing against the enclosure from any direction as a strong jet shall have no harmful effects.”

In this standard, the humidity of the air is not taken into account as a relevant criterion when classifying the degrees of protection.

Damp and cold ambient conditions combined with low duty cycles can restrict the use of luminaires with electronic ballasts.

Before installing luminaires, e.g. in rainwater retention basins, in water treatment plants or above clarification basins, etc., the manufacturer should be consulted in order to use special designs if necessary.

2. Marking

All SCHUCH luminaires bear the CE -marking. The CE -marking documents that the product complies with the relevant EU directives and may be freely marketed on the EU domestic market.

Whether a luminaire has test marks or other optional markings can also be found in the product data sheet.

3. General information

3.1 Permissible ambient temperatures

If no additional information is given, **LED luminaires** are designed for a maximum permissible ambient temperature of **-20°C to +25°C**.

Emergency luminaires are excluded from this.

Explosion-protected equipment is generally designed for an ambient temperature of up to **+40°C**.

Special versions for lower (**T..**) or higher (**H..**) temperatures are available on request.

3.2 Rated voltage

Unless otherwise indicated, all luminaires listed in the catalogue are suitable for a rated voltage of $230V \pm 10\%$ / 50Hz. Luminaires for other voltages and frequencies are usually available on request.

3.3 EMC

The EMC Directive and the Electromagnetic Compatibility Act (EMVG) regulate the requirements for EMC and ensure that only luminaires with a sufficient level of electromagnetic compatibility are placed on the European market; EMC is therefore a product characteristic and thus a quality feature. The corresponding technical requirements as a basis for EMC are defined in the European standards. In Germany, the Bundesnetzagentur is responsible for and monitors EMC.

EMC conformity means that every luminaire complies with the protection requirements; these are:

- limited interference emission (EN 55015)
- adequate immunity to interference (EN 61547)
- limitation of mains harmonics (EN 61000-3-2)
- limitation of voltage changes/fluctuations and flicker (EN 61000-3-3)

Compliance with the standards ensures a defined compatibility of different loads. Nevertheless, even if the standards are complied with, unfavourable distances between useful and interference levels may impair e.g. radio reception when using a radio with a rod antenna. In this case, the distance between the radio and the luminaire must be increased, for example.

4. Properties of LED luminaires

4.1 Rated values in the data sheets of LED luminaires

All tolerances of the rated values for system wattage, luminaire luminous flux and luminous efficacy stated in the catalogue comply with the specifications according to IEC 62722-2-1. The luminaire luminous flux is not more than 10% below the stated rated luminous flux. The connected load of the luminaire is not more than 10% above the rated power specified in the data sheet. All rated values refer to an ambient temperature of $T_a = 25^\circ\text{C}$ unless otherwise stated. If LED luminaires are operated at higher temperatures, the luminaire luminous flux is typically reduced by 1.5% per 10K.

4.2 Service life specifications of LED luminaires:

The data sheet specifies the average rated service life L_x . L_x describes the time after the original luminaire luminous flux has decreased to a percentage value x . At the rated service life L_x , the luminaire luminous flux is $x\%$ of the initial value. Typical values of „ x “ are 70 (L_{70}), or 80 (L_{80}). The specification of the rated service life is linked to the proportion of luminaires with increased luminous flux reduction B_y and is represented as $L_x B_y$. The value B_{50} thus means that 50 percent of the luminaires fall short of the declared luminous flux component „ x “ at the end of the average rated service life L_x and 50 percent exceed it. **The service life specifications are based on defined test procedures. The specifications in the data sheet are expected values. The specified service life is therefore not a guaranteed property of the luminaire.** The specification $L_{80} B_{10} \geq 50,000\text{h}$ means that statistically 90% (100-10) of all luminaires still have at least 80% of their original luminous flux after 50,000h. $B_y = B_{50}$ applies to the average rated service life L_x (without addition). According to a recommendation of the ZVEI, this value should be stated in the data sheets.

Failures of control gear as well as the degree of soiling of the luminaire are not taken into account here.

The failure rate of operating devices depends not only on the specification of the

components and their quality, but also to a large extent on the operating temperature. The following applies: for $t_c \text{ max.}$ (maximum permissible device temperature) the failure rate is 2‰ per 1,000 h, i.e. for a service life of 50,000 h the percentage of failed units is up to 10 %.

Example: With 100 ECGs in continuous operation (at the max. permissible t_c temperature), statistically up to 10 units will have failed after 5.7 years.

Operation at lower ambient temperatures reduces failure rate.

4.3 Switching resistance of LED luminaires:

Switching frequency/switching cycles: Frequent switching can lead to an increased failure rate of LED modules. According to the specifications of the International Electrotechnical Commission (IEC), one switching per day is assumed for outdoor luminaires and up to three switching per day for indoor luminaires. If switching is to take place more frequently, the use of the corridor function (DIMC) is recommended. The corridor function (see chapter 5) enables unlimited switching of the luminaires. In corridor mode, the luminaires are not switched off but dimmed to 10%.

4.4 Use of LED luminaires in corrosive atmospheres

Harmful gases and other corrosive substances (e.g. ammonia, sulphur or chlorine compounds) can damage LEDs. Depending on the substance, concentration, temperature and duration of exposure, damage or even total failure is possible.

Even luminaires with a high ingress protection are affected by this. Corrosive atmospheres can penetrate the luminaires. A high IP code does not automatically mean that a luminaire is gas-tight. The suitability of the luminaires for the respective application can be determined e.g. by a practical test on site.

We recommend the use of luminaires from our luminaire range that are specially designed for use in areas exposed to hazardous gases.

- **ER version:** Increased protection against corrosive atmospheres. Luminaires in ER version are approved e.g. for use in production facilities and warehouses for vehicle tyres.
- **Version HR:** High protection against corrosive atmospheres. Luminaires in version AUS HR are approved e.g. for use in outdoor areas of sewage treatment plants.
- **Version XR:** Absolutely gas-tight luminaire. The Primo XR luminaire is approved for hazardous gas areas (exception: explosive atmospheres, swimming pools, exposure to chemicals that attack PMMA or stainless steel).

4.5 Use of LED luminaires in a humid atmosphere

If luminaires are operated in damp and cold ambient conditions in combination with low duty cycles, there is a risk of premature failure. Luminaires with a high IP code are also affected. Critical applications are e.g. rainwater retention basins, water treatment plants and certain applications in the agricultural sector.

After the luminaire is switched off, a underpressure is created, which leads to the intake of humid outside air. This atmosphere can damage or destroy electronic components in the luminaire.

This problem can be remedied by switching the luminaire on regularly and for longer periods of time. Under certain circumstances, an additional vent is necessary. Where this is not possible, only luminaires in XR or HR design (gas-tight or corrosion-resistant) should be used. Other suitable special designs are available on request.

4.6 Mounting of LED outdoor luminaires of protection class II on mounting devices that are electrically insulated from the earth potential.

When mounting LED luminaires of protection class II on fixing devices that are electrically insulated from the earth potential, electrostatic charges may occur due to weather conditions, among other things. This can cause damage to the control gear and/or the LED modules.

Mounting devices insulated from the earth potential are, for example, wooden, concrete or plastic poles, insulated steel poles, wall mountings and cable suspensions.

The installation of a luminaire in protection class I is a remedy. In this case, charges are discharged via the PE.

If protection class II luminaires are to be installed, a special version with ESD discharge is available.

4.7 Overvoltage protection for LED outdoor luminaires

LED outdoor luminaires are significantly more sensitive to overvoltage events than luminaires with conventional ballasts.

Switching operations/load changes can cause overvoltages of up to approx. 6kV in the mains.

Lightning strikes in the vicinity of outdoor lighting installations can cause voltages up to a multiple of 10kV, depending on the distance of the strikes to the luminaire and the conductivity in the ground.

In the case of direct lightning strikes in a streetlight, the pulse heights that occur are so great that there is no economically justifiable protective measure.

The ECGs used by SCHUCH already have an increased surge voltage resistance.

The surge voltage resistance of the luminaire can be further increased by an additional surge protection module in the luminaire or in the cable junction box.

Surge protection modules, which disconnect the luminaire from the mains in the event of their own defect, offer even greater operational safety.

Increased overvoltage protection in protection class II luminaires is only possible to a limited extent for normative reasons, among others!

No protective earth conductor may be connected in protection class II luminaires. However, comprehensive overvoltage protection is only possible if the protective earth conductor is available and the luminaire housing and mast are connected to the protective earth conductor.

As a further measure, we recommend installing surge arresters in the distribution boards. This will intercept direct and indirect lightning strikes into the supply network.

The probability of a lightning strike varies greatly from region to region and in Central Europe varies from less than one strike per year and km² to over 20 strikes per year and km².

Should outdoor LED luminaires or outdoor luminaires with electronic ballasts be installed e.g. in areas with an increased probability of lightning strikes, we recommend the use of luminaires of protection class I and an additional surge protection module in the cable junction box, or in the luminaire (on request) as well as measures in the distribution board.

4.8 Restrictions in the operation of LED outdoor luminaires with power reduction

In extremely rare cases, leakage currents may occur between the phases or phase and neutral. This can lead to incorrect switching behaviour in luminaires with power reduction. The luminaires then do not switch to power reduction.

Leakage currents can be caused by old, damaged cables with insufficient insulation or high capacitive coupling.

When replacing individual luminaires in existing installations with older LED luminaires or when extending lighting installations, problems can also occur when switching to power reduction. In such cases, additional relays must be retrofitted at the control phase input in the luminaires already installed. In such cases, it is more cost-effective to add luminaires with autonomous power reduction (LA => without control phase).

4.9 Inrush currents with LED luminaires - limited automatic load capacity

In contrast to luminaires with conventional control gear, in lighting systems with LED luminaires all luminaires start at the same time (also applies to ECG luminaires with conventional lamps).

In the storage capacitor of these ECGs, a very high charging current flows for a short time at the moment of switch-on. The maximum permissible number of luminaires per miniature circuit-breaker is not limited by the operating current but by the inrush current. It can be found online on the respective product data sheet of the luminaire.

4.10 Photobiological safety

The photobiological safety of luminaires is dealt with in the DIN EN 62471:2009 standard. It describes limit values or risk groups for irradiation as well as corresponding measurement methods in the UV, visible and infrared spectral range. The protection goal is to exclude thermal as well as photochemical hazards to the human eye and skin.

Almost all SCHUCH luminaires fall into the lower risk groups 0 and 1. They cannot

cause any photobiological damage to the eye or human skin and are therefore harmless. Luminaires that fall into risk group 2 are marked with a picture symbol („do not look into the light source“). In addition, the installation instructions indicate the distance at which looking into the luminaire is safe. Due to the installation location, a hazard can be ruled out for most technical luminaires of risk group 2, as it is not possible to look into the luminaire from a short distance. Doubling the distance reduces the radiation reaching the eye to a quarter (square law of distance). Therefore, in most cases, caution is only required during maintenance work.

Luminaires in risk group 3 cannot be approved because they would pose a not inconsiderable risk.

4.11 Replacement of control gear and LED modules when repairing luminaires.

SCHUCH LED luminaires contain „light sources that cannot be replaced by the user*“, so-called LED modules. These LED modules may only be replaced by SCHUCH, a service technician appointed by SCHUCH or a similarly qualified person. (* not an electrotechnical specialist).

The replacement of electrical components or the repair of LED luminaires may only be carried out with components supplied or authorised by SCHUCH.

Many control gear units have programming, i.e. replacing a control gear unit with an identical unit does not automatically guarantee the desired function!

When repairing LED luminaires, there is a risk that LEDs may be damaged or even directly destroyed by electrostatic discharges. ESD protective measures must therefore be taken when repairing the luminaires (dissipative work surface, ESD shoes/ESD wristband, ESD clothing).

In protection class II luminaires with metal housings, cables with double insulation are installed for safety reasons and cables are fixed to each other with cable ties at terminal points. When repair work is carried out, the original condition of the luminaire must be restored, e.g. double-insulated cables must not be replaced by single-insulated cables. Cable ties that have been removed must be replaced.

4.12 Light emissions (ULOR+ULR)

ULOR (Upward Light Output Ratio): Indicates the proportion of the luminous flux emitted by a horizontally aligned luminaire (inclination 0°) into the upper half-space. The value is usually given as an integer percentage.

ULR (Upward Light Ratio): In contrast to ULOR, which refers exclusively to the luminaire, ULR indicates the proportion of luminous flux emitted into the upper half-space by a luminaire mounted in an installation. This is therefore largely dependent on the inclination of the luminaire. The value is usually given as an integer percentage.

5 Control of lighting systems, dimming and power reduction

5.1 DIMA (Analogue Dimming)

By means of an external potentiometer or a control voltage of 1-10V, dimming in the range of typically 10-100% is possible (LED). Several luminaires can be operated in parallel on one 1-10V line, the max. number depends on the load capacity of the potentiometer/control unit and the line length. The number of ECGs to be connected can be increased with a signal amplifier. Due to voltage drop on the line and coupling of interference, luminaires on a line may nevertheless have slightly different dimming levels.

All luminaires with DIMA feature are supplied with 2 additional terminals, marked „1-10V+“ and „1-10V-“. The cables to the control inputs must be of mains voltage-proof design and can be included in the connection cable.

5.2 DIMD (Digital Dimming and Control with DALI)

DALI (Digital Addressable Lighting Interface) and the further developed standard DALI-2 are a protocol for controlling luminaires. With a small number of lines, many luminaires can be controlled individually even over long distances. In addition, DALI can be easily integrated into higher-level building automation systems such as KNX, EIB or LON.

DALI-2 is the latest version of DALI, which ensures improved interoperability between components from different suppliers through mandatory certification and extended functions, e.g. energy data.

Up to 64 operating devices can be controlled via one DALI line. It should be noted that several control gear units can be installed in one luminaire. The maximum cable length is 300m with a minimum cable cross-section of 1.5mm². The range may be limited due to unfavourable conditions.

A larger range can only be achieved with repeaters, a higher number of luminaires per DALI line only with broadcast commands. (Attention, this severely limits the functionality of a DALI-2 system in particular). Better is the parallel operation of several DALI lines with one controller. With LIMAS Line PRO SCE controllers, 3 DALI lines can be operated. By networking (LAN) several controllers, up to 15 DALI lines are possible (960 control gear units).

Dimming levels of 1-100% are possible depending on the control gear. For the operation of a DALI system, further devices are required (controller, power supply unit, etc.), which are not included in the scope of delivery of the luminaire.

All luminaires with DIMD feature are delivered with 2 additional terminal points, marked „DA“. The polarity is irrelevant. The cables to the control inputs must be of mains voltage-proof design and can be included in the connection cable.

DALI inputs have only a low overvoltage resistance. Networking with DALI is therefore not recommended for outdoor luminaires. The lines should be routed from the luminaire to the cable transition box at the most, e.g. for connecting Powerline or a programming interface. Additional overvoltage protection is recommended.

If the DALI function is not used but the lines have been laid, they should be short-circuited at a central point to avoid interference (disconnect bus power supply!).

There should be no mixed installations of DALI and DALI-2 peripherals.

Further information is available at: <https://www.dali-alliance.org/>

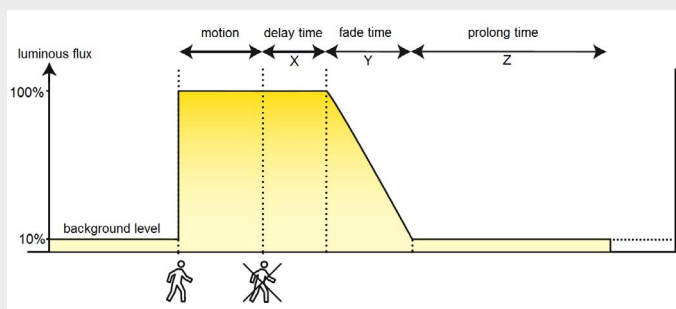
5.3 DIMC (corridor function with control phase)

The corridor function enables simple power reduction of luminaires to a fixed value by means of an ordinary 230V control voltage.

In combination with motion detectors or door contacts, high energy savings are possible in rarely used areas.

In the standard setting, the luminaire only provides 100% luminous flux as long as the control phase is active. After deactivation of the control phase, the luminaire dims down to the background level of 10% within approx. 30 seconds (due to technical limitations, a higher dimming level results for individual versions). As LED modules and control gear only have a limited switching resistance, dimming results in a significantly longer service life of the luminaire compared to switching the luminaire on and off directly (without DIMC). The luminaire never switches itself off, but may be switched off by the user at any time.

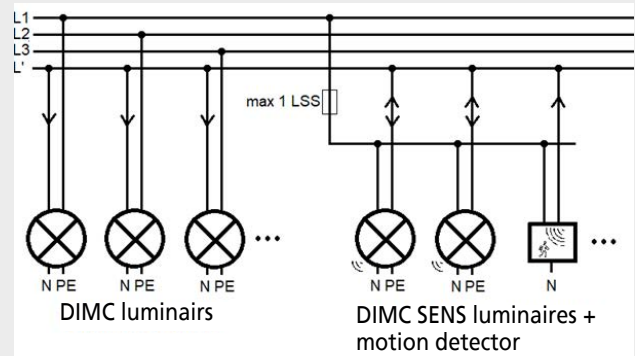
The graphic shows the luminous flux output of a luminaire with DIMC that is controlled via a motion detector.



The following default settings are made for luminaires with DIMC. The parameters can be customised on request:

- Delay time: luminaire maintains 100% luminous flux for time duration X after switching off the control phase (default setting 0 seconds, but customer can set his own „hold time“ by setting the switch-off time delay of the motion detector).
- Fade time: faster or slower dimming down of the luminaire in time period Y (default setting: approx. 30 seconds)
- Automatic switch-off: Luminaire switches off completely after time period Z without activity. (Standard setting: never switch off; versions Z30: luminaire switches off after 30 minutes)
- Background level: Dimming level when there is no activity. (Standard setting: 10%; due to technical limitations, a higher dimming level may result for individual versions).

All luminaires with DIMC feature are supplied with a 4-pole terminal.



For the different versions, the following instructions must be observed during installation:

- DIMC SENS luminaires have an integrated motion detector, as well as a connection for the control phase L'. (The connection here is both input and output). For this reason, the supply of all DIMC SENS luminaires, as well as all external motion detectors, must be on the same phase and a common circuit breaker. (-> Note the limited number of luminaires per common circuit breaker).
- DIMC luminaires do not contain an integrated motion detector. They only have one input for the control phase L' (-> at least one additional external detector or one additional DIMC SENS luminaire is required). The supply of all DIMC luminaires operated on one control phase can be divided among all 3 phases and any number of common circuit breaker. (-> number practically unlimited)

When using external motion detectors/sensors, only units with relay output may be used.

5.4 LR (power reduction with control phase) for outdoor luminaires

In the standard setting, the luminaire delivers 100% luminous flux when the control phase is applied. Without control phase, the luminaire is dimmed to 50%.

The time until the lower dimming level (usually 50%) is reached can be up to 180 seconds (comfort function). The 100% level is reached without any time delay.

Optionally, other dimming levels (10%-90%) and an inverse function of the control phase (reduced operation 50% when control phase is present) are possible.

All luminaires with LR feature have an additional terminal point, labelled LST. The control phase does not have to be in phase with the supply (L).

Chapter 4 describes possible restrictions in the operation of LED outdoor luminaires with power reduction via control phase.

5.5 LA (autonomous power reduction without control phase) for outdoor luminaires

If luminaires with power reduction are to be operated in existing installations where there is no control line, a self-sufficient power reduction can be used.

The time until the dimming level (usually 50%) is reached can be up to 180 seconds. The same applies to switching back to 100%. The gradual lowering or raising of the luminous flux of luminaires with power reduction means that switching is not visually perceptible. It thus serves the comfort of the user, as disturbing influences on road users or residents are avoided. Since a visual check of the power reduction is not possible, the change of the luminaire input current or the illuminance should be used for a possibly necessary verification of the proper function.

After the initial start-up, a luminaire needs up to 3 days until the line reduction works reliably.

The luminaire dims completely automatically to different levels (between 10% and 90%) at preset times. Several dimming levels per night are possible. Standard: One dimming level, 50% luminous flux from 22:00-04:00 CET and 23:00-05:00 CEST.

The luminaire does not use a real-time clock as a timer; instead, the dimming times are recalculated every night from the previous switch-on and switch-off times. This excludes the possibility of deviations in the dimming rate, even after decades of operation.

For this reason, however, it is also not possible to change over to daylight saving time, as the switch-on and switch-off times are determined by twilight. Controlling the luminaires via a timer is not recommended; the dimming times are then dependent on the respective setting.

In Germany, shifts of up to +18 or -18 minutes may occur due to the width of the time zone.

Special programming may be necessary for installation locations outside Germany.

5.6 CL (constant luminous flux function)

Luminaires with feature CL are initially set to approx. 90% of the output compared to basic types without CL. The luminous flux remains constant throughout the entire service life. The output increases from 90% to a maximum of 100% at the end of the service life (100,000h). After this time, the luminous flux degradation is no longer compensated by an increase in output.

5.7 MA-Z (central monitoring of single-battery luminaires via DALI line)

Up to **64 luminaires** with MA-Z version can be centrally **monitored** via a DALI line. All known restrictions of a DALI system apply (see 5.2).

In addition, a LIMAS Line PRO SCE controller is required (not included in delivery). The emergency luminaires can be switched on and off via a 230V control phase (L') using a switch.

All control gear is certified according to IEC 62386-202 (DALI-Self-contained emergency control gear).

5.8 DIMD MA-Z (central control and monitoring of single-battery luminaires with DALI-2 ECG)

Up to **32 luminaires** with DIMD MA-Z version can be centrally **monitored and controlled** via a DALI line. All known restrictions of a DALI system apply (see 5.2).

In addition, a LIMAS Line PRO SCE controller is required (not included in delivery).

The emergency luminaires can only be dimmed and switched via DALI-2 compatible control elements/sensors. No 230V control phase may be connected.

All control gear is DALI-2 and certified according to IEC 62386-202 (DALI-Self-contained emergency control gear).

5.9 DI (central monitoring of Ex single-battery luminaires via DALI line)

Up to **64 luminaires** with DI version can be centrally monitored via a DALI line. All known restrictions of a DALI system apply (see 5.2).

In addition, a LIMAS Line PRO SCE controller is required (not included in delivery). The emergency luminaires can be switched on and off via a 230V control phase (L') using a switch.

All control gear is certified according to IEC 62386-202 (DALI-Self-contained emergency control gear).

5.10 DIMDI (central control and monitoring of EX single-battery luminaires with DALI-2 ECG)

Up to **64 luminaires** with DIMDI version can be centrally **monitored and controlled** via a DALI line. All known restrictions of a DALI system apply (see 5.2). A LIMAS Line PRO SCE controller is required to monitor and control the luminaires (not included in delivery).

The emergency luminaires can only be dimmed and switched via DALI-2 compatible control elements/sensors. No 230V control phase may be connected.

DIMDI control gear is IEC 62386-202 (DALI-Self-contained emergency control gear) and DALI-2 compatible.

5.11 RFL (luminaire with Zhaga Book 18 socket(s), prepared for light control)

Luminaires with RFL socket (Ready for Lightmanagement System) enable easy retrofitting of light controls and/or sensors. The luminaire does not have to be opened or rewired. All Zhaga Book 18 and D4i certified sensors, IoT nodes etc. are supported. (Due to the variety of systems on the market, we can only provide support for setting up the systems we sell).

Versions:

- RFL0: The luminaire has a socket on the top of the luminaire e.g. for stand-alone photocell or light management HUB with GPS and radio reception
- RFLU: The luminaire has a socket on the underside, e.g. for stand-alone motion detectors or light management HUB with radio reception.
- RFL0U: The luminaire has 2 interconnected sockets at the top and bottom, e.g. for light management HUB and motion detector (use only compatible products).

Due to the design of some luminaires, the socket can only be installed at the top or at the bottom. For Pole-Top luminaires, the socket is located in the luminaire (luminaire must be opened for replacement).

Zhaga and D4i define, among other things, the mechanical and electrical connection of luminaire and light management products. The choice of light management system can thus be made independently of the luminaire manufacturer. However, different light management systems are not compatible with each other!

All luminaires are delivered with sealing caps mounted on the sockets. If no components are installed, the sealing caps must not be removed! Without a cap, the luminaire is not tight and warranty claims cannot be made.

When installing the light management components, ensure that they engage properly in the socket and that they are firmly seated. (bayonet lock).

The connection of non-Zhaga/ D4i compliant adapters, extension cables or devices is not permitted.

In many applications, RFL luminaires are initially operated without light management components, but are initially intended to contain special functions that later conflict with the selected light management system:

The constant luminous flux function (CL) and the set maximum luminous flux are not affected (for luminaires in VARIO version, the maximum luminous flux can possibly be increased via DIP switch).

All other functions (autonomous dimming LA, control phase LR) are automatically deactivated as soon as the base is used. DIMD (DALI) versions are not possible.

5.12 Light management system (LMS, LMG)

Luminaires with LIMAS light management system (LMS, LMG) are system-compatible with RFL components such as RFL LIMAS HUB3 and RFL LIMAS HUB3 G2 GPS SIM. With LMS luminaires, the components are permanently installed in or on the luminaire and cannot be replaced.

For LMS luminaires and RFL luminaires with RFL LIMAS HUB3 and RFL LIMAS HUB3 G2 GPS SIM, a USB dongle or gateway is required for programming.

For control according to time profiles, at least one luminaire in LMG version (with GPS antenna) or the gateway must be used.

Gateways must be installed outdoors in plastic control cabinets in direct proximity to LMS or RFL luminaires with RFL LIMAS HUB3.

5.13 Other dimming functions

Other dimming functions are available on request, e.g.:

- amplitude dimming (dimming by varying the mains voltage)
- different dimming levels in emergency lighting mode for luminaires on central battery systems (see also chapter Emergency lighting).

5.14 Limitations when using radar sensors:

Radar sensors work ideally when steady movements in the environment (background noise) are as low as possible.

(background noise) are as low as possible. In heavy fog, rain and branches and leaves moved by wind, the detection of moving objects such as pedestrians, cyclists and cars is made more difficult. Conversely, heavy rain and/or branches and leaves moved by wind, for example, may trigger motion detection. Shrubs and trees in the vicinity of the radar sensor should therefore be continuously cut back. In the vicinity of high-voltage power lines and transmission masts, the function of radar sensors may also be impaired.

5.15 Restrictions on the use of infrared sensors:

IR sensors operate with a pixel-based detection field that detects temperature differences between moving objects (road users) and their surroundings.

The detection range of the sensor depends on the corresponding light spot height and luminaire inclination.

In practical operation, objects cannot be detected under the following conditions:

- Sensor is covered by object (e.g. branch)
- Persons or objects do not have the required size in the detection range of the sensor
- Persons or vehicles are moving at a speed < 1m/s
- Persons (e.g. with special heat-insulating clothing) or vehicles (e.g. still cold vehicles in winter) do not have a sufficient temperature difference (at least 4K to the environment).

- People move precisely between the rasterised pixel-based detection points. detection points.
- Persons or objects are too far away from the detection range of the sensor. of the sensor.








In addition, there are operating conditions under which the sensor has no function or a malfunction:

- Condensation on the sensor (e.g. in fog) or icing.
- Static charge caused by wind (should, however, be discharged through the earthed luminaire housing).
- Operation outside of the specified operating temperature (see product data sheets)
- Incorrect switching due to air turbulence, e.g. on branches




6. Safety classification for luminaires

The selection of luminaires for certain applications requires the consideration of corresponding protection types and protection classes.


6.1 Ingress Protection Code according to DIN VDE 0711/EN 60598/IEC 598

	1 st CHARACTERISTIC NUMERAL	2 nd CHARACTERISTIC NUMERAL	
RA-TING	SOLID PARTICLE PROTECTION	LIQUID INGRESS PROTECTION	Symbol
IP 20	solid objects > 12 mm	non-protected	
IP 23	solid objects > 12 mm	protected against spraying water	
IP 40	solid objects > 1 mm	non-protected	
IP 43	solid objects > 1 mm	protected against spraying water	
IP 44	solid objects > 1 mm	protected against splashing water	
IP 54	dust protected	protected against spraying water	
IP 55	dust protected	protected against water jets	
IP 65	dust tight	protected against water jets	
IP 66	dust tight	protected against heavy seas	
IP 67	dust tight	protected against effects of immersion in water between 15cm and 1m for 30 minutes	
IP 68	dust tight	protected against effects of immersion in water under pressure for long periods	
IPx9k	dust tight	protected against effects of high pressure water jets	

6.2 Protection classes

	Meaning	Notes
I	 Light fittings with connection point for protective conductor, to which all touchable metal parts must be connected, which can immediately be on mains voltage level in the event of a fault.	Connection to the mains protective conductor is mandatory. The symbol is attached to the connection point.
II	 In the case of such light fittings, no metal parts may be touched that could immediately be on mains voltage level in the event of a fault (protective insulation or double insulation).	The light fitting must not have a protective earth connection and must not be connected to a protective earth conductor (except for functional earth*).
III	 Light fittings for operation with safety extra-low voltage, i.e. with voltages below 42 V, which are generated with a safety transformer according to VDE 0551 or taken from batteries or accumulators.	

* Functional earth: Earthing of a point in a system, which is necessary e.g. to start a lamp or to fulfil EMC requirements.

This is not part of the electrical protection system. Symbol: 

7. Areas of application and properties of SCHUCH luminaires

DIN VDE 0100 must be observed when selecting luminaires. (see section 4).

7.1 Use of moisture-proof luminaires taking into account their degree of protection



Damp-proof luminaires with a high ingress protection (IP 65) are indoor luminaires for ceiling, pendant and trunking mounting (horizontal mounting). If these luminaires are not used as intended, e.g. if they are mounted outdoors, in a different mounting position and/or in extremely high humidity, condensation may occur. In the very dense luminaires, a underpressure is created during the cooling phase after switching off or in the case of strong temperature fluctuations (e.g. mounting in outdoor installations). This can cause moist air to be drawn into the interior of the luminaire and to condense. Water accumulation in a moisture-proof luminaire is thus by no means due to a leaky luminaire, but rather to a luminaire that is too tight. (The tighter the luminaire, the greater the risk of condensation).

For such cases, e.g. for outdoor use, SCHUCH has special luminaires such as the 161/162... AUS series. These luminaires are suitable for unprotected use outdoors.




When installing moisture-proof luminaires on cold surfaces, condensation can also occur. In such cases, it is necessary to mount the luminaires at a distance from the mounting surface. Luminaires with protection class IP65 are „jet water protected“. Direct spraying (e.g. during cleaning work) with high-pressure cleaners/steam jets is not permitted. The forces that occur are many times higher than during a water jet test and can lead to water ingress.

7.2 „F“ symbol

Luminaires suitable for mounting on normally flammable surfaces (ignition temperature >200 °C) must be constructed in such a way that in the event of a fault, a maximum of 180°C will occur on the mounting surface.

Such luminaires used to be marked with the -symbol. Luminaires that do not meet the requirements must now be negatively marked with the symbol .

7.3 Luminaires with limited surface temperature „D“ symbol

In areas subject to fire hazards (risk of combustible dust deposits), only luminaires that comply with the requirements of DIN EN 60598-2-24 and bear the  mark may be used. The marking  replaces the -marking previously used in Germany. Examples include lighting installations in paper and wood processing and agricultural premises.

Requirements and information are given in the installation regulations (e.g. VDE 0100 Part 482) and also in the requirements of property insurers (e.g. VDS 2033).

Similar to gases, mists and vapours, all combustible dusts and fluff can also react explosively under certain conditions, i.e. in these cases Ex luminaires must be used.

In case of doubt, consult the supervisory authorities, e.g. the trade inspectorate or the TÜV.

7.4 Frameless glass made of toughened safety glass

Frameless glass must not be damaged by installation or maintenance work, neither on the surface nor in the edge area!

If, for example, a tool hits the edge of the glass and material flakes off, glass breakage cannot be ruled out. Such a breakage can also occur with a considerable time delay after the damage.

7.5 Use of luminaires in animal husbandry

When used in stables, luminaires are particularly exposed to ammonia from animal excrement.

The LED modules mounted in linear luminaires of classic design (e.g. series 161 or 163) and their control gear are damaged by ammonia exposure.

We recommend the use of the Tube light fitting „Primo XR LW“. This luminaire is hermetically sealed to prevent aggressive substances from entering the interior of the luminaire.

The linear luminaire „LUXANO 2 LW“, or other luminaires in the „LW“ or „ER“ versions are also suitable for most agricultural applications. Please consult us.

In poultry farming, the „Primo XR LW DIMD“ luminaire should be used. This meets the special requirements regarding flicker as required by the Federal Ordinance on Livestock Husbandry.

7.6 PC cover glasses

Polycarbonate has the property that it tends to turn yellow under the influence of UV light. PC luminaire cover glasses are exposed to natural UV light when installed outdoors. However, the UV content of the light sources used must also be taken into account.

The polycarbonates we use to manufacture our PC cover glasses are provided with so-called UV additives that improve UV stability.

However, „yellowing“ due to UV radiation cannot be prevented. The additives merely delay this process!

The parameters here are the operating time of the luminaire and the level of UV exposure.

Discolouration of PC glasses does not represent a product defect.

8. Emergency lighting

8.1 Classification and terms

Emergency lighting is divided into emergency escape lighting and standby lighting. Emergency escape lighting is subdivided into:

- safety lighting for escape routes
- High-risk task area lighting
- anti-panic lighting

8.2 Occupational safety

In Germany, occupational safety is divided into two parts. State ordinances (e.g. Workplace Ordinance) and the regulations of the German Social Accident Insurance (DGUV) apply (e.g. DGUV Regulation 3, previously BGV A3).

Under the Workplace Ordinance, which has been in force since August 2004, safety lighting must be provided in workplaces where it is not safe to leave or where there is a risk of accidents occurring if the general lighting fails.

The individual regulations are concretised by the „Technical Rules for Workplaces“, which are important for safety lighting:

- ASR A1.3 Safety and health signage
- ASR A2.3 Escape routes, emergency exits, escape and rescue plan
- ASR A3.4/7 Technical rules for workplace safety lighting, optical safety systems

8.3 Electrical engineering requirements

DIN VDE 0108-1 with its comprehensive statements on the design of safety lighting systems was withdrawn in March 2007. It has been replaced by a European standard

published as DIN EN 50172 (VDE 0108-100):2005-01. The withdrawal of DIN 0108-1 had become necessary because national standards have to be withdrawn as soon as a European standard on the same subject appears.

DIN EN 50172 / VDE 0108-100 is to be regarded as a European „consensus paper“ because it deals only with basic safety lighting issues and does not reflect the long-established status of safety lighting in Germany - especially with regard to central battery-supplied safety lighting systems.

In the meantime, DIN VDE V 0108-100-1 (VDE V 0108-100-1):2018-12 is available. DIN VDE V 0108-100-1 is recommended for use by UK 221.3.

It should be noted that the application of this pre-standard should be agreed separately between the building owner and the installer.

8.4 Lighting requirements

The lighting requirements for emergency lighting are set out in DIN EN1838 (11/2019) and DIN EN1838 Supplement 1 (11/2018).

Emergency lighting is the lighting that takes effect when the power supply to the general lighting system is disrupted.

Safety lighting for escape routes

The following applies to emergency lighting for escape routes:

$E_{min} \geq 1 \text{ lx}$ (horizontal illuminance on the floor along the centre line of the escape route, measured at a height of up to 2 cm).

$E_{min} / E_{max} \leq 1:40$ on the escape route

Glare limitation:

h = mounting height

I_{max} = maximum permissible luminous intensity at specific exit angles

$h[m]$	$< 2,5$	$2,5 \leq h < 3$	$3 \leq h < 3,5$	$3,5 \leq h < 4$	$4 \leq h < 4,5$	$\geq 4,5$
$I_{max}[cd]$	500	900	1.600	2.500	3.500	5.000

Colour rendering index: $R_a \geq 40$

Escape routes must not only be illuminated but also marked.

Safety signs and identification of escape routes:

Escape signs must be visible from every point along the escape route.

The colours must comply with ISO 3864.

The luminance of the safety colour green must be at least 2 cd/m^2 at every point after mains failure.

In mains operation, the luminance of the contrast colour white shall be 500 cd/m^2 .

$L_{min} / L_{max} > 10 : 1$

$L_{white} / L_{green} = 5 : 1$ to $15 : 1$

To determine the intended recognition range of a safety sign, the following definition applies:

$$l = h \times z$$

with

h = height of the pictogram

z = 100 for illuminated signs

z = 200 for backlit signs

High-risk task area lighting:

For High-risk task area lighting workplaces, the following applies:

$E_{min} \geq 10 \% E_m$ ($E_{min} = 15 \text{ lx}$).

E_m = maintenance value of illuminance for the corresponding visual task

Uniformity U_0 of illuminance > 0.1 (U_0 is the quotient E_{min} / E of minimum and average illuminance)

Glare limitation:

h = mounting height

I_{max} = maximum permissible luminous intensity at specific exit angles

h[m]	< 2,5	2,5 ≤ h < 3	3 ≤ h < 3,5	3,5 ≤ h < 4	4 ≤ h < 4,5	≥ 4,5
I_{max} [cd]	500	900	1.600	2.500	3.500	5.000

Colour rendering index: Ra ≥40

8.5 Use of luminaires in emergency lighting systems for central battery operation (CB).

Many control gear units are labelled as also suitable for 220V DC operation. This does not mean that they are automatically suitable for central battery systems. These operating devices as well as the luminaire must fulfil all requirements of DIN EN 60598-2-22, which applies to luminaires with central emergency power supply (ZB) and also to single-battery luminaires (EB).

They must meet the requirements from this standard, e.g. section 22.7.3 for protecting the luminaire with e.g. a DC fuse or to section 22.19 for operation at higher temperature (70°C).

SCHUCH supplies luminaires in the so-called „ZB version“ for such cases.

8.6 Individual monitoring of LED luminaires in emergency lighting systems with central battery

The (common) monitoring modules of the companies INOTEC, CEAG, Ecker/Stahl for 230V system voltage monitor the current consumption on the primary side of the control gear and give an error message if the current falls below a certain value.

LED modules are made up of series and parallel circuits of individual LEDs.

Low-resistance failures of individual LEDs of an LED module (on the secondary side of the control gear) do not necessarily lead to a change in the current consumption on the primary side, which is recognised as a fault by monitoring modules!

8.7 Individual monitoring of LED single-battery luminaires

According to DIN VDE V 0108-100-1, the status of the luminaire must be monitored for safety purposes (ready for operation, malfunction, etc.) and displayed at a central, suitable location during the time required for operation. SCHUCH supplies luminaires for such cases, e.g. DALI emergency lighting control gear (see options).

For the operation of a DALI bus system, further devices (control unit, power supply unit) are required which are not included in the scope of delivery of the luminaire.

8.8 Conversion of general lighting luminaires to emergency luminaires

Converting a general lighting luminaire into an emergency luminaire creates a new product. This new luminaire must comply with all technical regulations and statutory provisions applicable to the product, such as RED, LVD, EMC, RoHS, VDE regulations, DIN standards, and a new conformity assessment must be carried out and a new declaration of conformity drawn up. See „Information on the conversion of general lighting luminaires to emergency luminaires“ (ZVEI 05/2019).

Literature:

B. Weis, H. Finke: „Not - und Sicherheitsbeleuchtung“, Hüthig & Pflaum-Verlag Fachbuch: ISBN 978-3-8101-0428-1 E-Book/PDF: ISBN 978-3-8101-0429-8

9. Plastics in SCHUCH luminaires

9.1 Chemical resistance

The luminaire housings of many SCHUCH luminaires are made of glass-fibre reinforced polyester. This material is heat-resistant, mechanically stable, electrically insulating, weatherproof and chemically resistant.

The luminaire covers are usually made of silicate glass, polycarbonate (PC) or polymethyl methacrylate (PMMA).

For polycarbonate (PC) and polymethyl methacrylate (PMMA), their resistance to various chemical substances - according to the current knowledge of the relevant material manufacturers - is given below. Experience shows that the temperature of chemical (aggressive) substances often plays a significant role.

Parts made of polycarbonate (trade name Makrolon, Lexan etc.) are more impact resistant and heat resistant than parts made of PMMA (trade name Diakon, Plexiglas etc.). Polycarbonate is not resistant to all agents. For cleaning, we recommend warm water with a weakly alkaline detergent, e.g. REI and PRIL. Afterwards, rinse well with clear water. After rinsing, there must be no residual cleaner on the treated luminaire. The PH value of the cleaner must be less than 7.5. For this reason, no soap or similar should be used. In particular, we would like to point out that PC is not resistant to oils and greases! For moisture-proof diffuser luminaires with plastic caps, their chemical resistance must also be taken into account (please consult us). In many cases, KE fasteners (made of stainless steel) are an alternative.

Material	Poly-methylacrylat (PMMA)	Polycarbonat (PC)	Thermoplastic polyester (PBT)
Acetone	–	–	–
Ethylalcohol (to 30 %)	o	o 96% ¹⁾	+
Battery acid	+	+	n/a
Ammonia	+	–	+ up to 10% ¹⁾
Boric acid 3 %	+	+	n/a
Sodium Hypochlorite	+	–	n/a
Chlorine (moist)	–	–	n/a
Chromium acid 10 %	o	+	n/a
Acetic acid concentrated	–	–	–
Acetic acid (up to 10%)	+	+ < 10% ¹⁾	+
Formaldehyde (up to 10%)	o	+	n/a
Glycerin	+	o	+
Uric acid (up to 20%)	+	n/a	n/a
Potassium (20-25°C)	+	–	–
Kerosene (aviation gasoline)	o/–	–	+
Sea water	+	+	+
Methyl alcohol (up to 23°C)	o/–	–	+
Lactic acid < 4%	+	+	n/a
Sodium chloride	+	+	+ up to 10% ¹⁾
Sodium hydroxide Solution 20-25 °C	+	–	+
Petroleum	o	o	+
Phosphoric acid Concentrated	–	+ 10 up to 30% ¹⁾	+ 25% ¹⁾
Soap liquor (at 23 °c)	+	o	up to 10% OK
Sulfuric acid H2SO4	–	–	–
Sulfuric acid up to 30%	+	+	+ bis 10% ¹⁾
Sulphur dioxide dry (at 23 °C)	–	o	n/a
Turpentine (at 23 °C)	+/o	–	+
Toluene	–	–	–
Acidity of wine	+ up to 50% ¹⁾	+ up to 10% ¹⁾	n/a
Citric acid up to 20 %	+	+	+ up to 10% ¹⁾

Legend: + = resistant, O = limited resistant – = volatile (unstably) ¹⁾ = concentration

10. Corrosion resistance of sheet steel luminaires

Our sheet steel luminaires are powder-coated with a high-quality polyester lacquer.

In addition to corrosion protection, the coating offers very good scratch resistance.

Depending on the conditions of use at the installation site, however, corrosion on the housings cannot be completely ruled out.

Examples of this are applications with permanent humidity, mounting locations near lakes under canopies or areas with aggressive media/chemicals.

For such conditions, depending on the requirements, we offer modified versions with KTL coating, aluminium or VA enclosures.

11. Glare evaluation in industrial lighting

A distinction is made between 2 types of glare:

1. Discomfort glare

This causes an unpleasant sensation without necessarily involving a noticeable reduction in visual acuity.

2. Disability glare

This results in a reduction in visual function.

The United Glare Rating (UGR) method was developed to standardise the assessment of discomfort glare caused by indoor/office lighting worldwide.

In industrial lighting, however, it is usually a question of visual performance and thus of disability glare, which is essential for occupational safety and accident prevention.

The UGR method cannot assess disability glare. Accordingly, it is not taken into account in lighting design in industrial plants. The UGR method is therefore not suitable for assessing the glare of lighting installations in industrial applications, especially for hall lighting.

A suitable procedure must be developed for these applications in the future. The relevant expert committees in the ZVEI have already taken up this task.

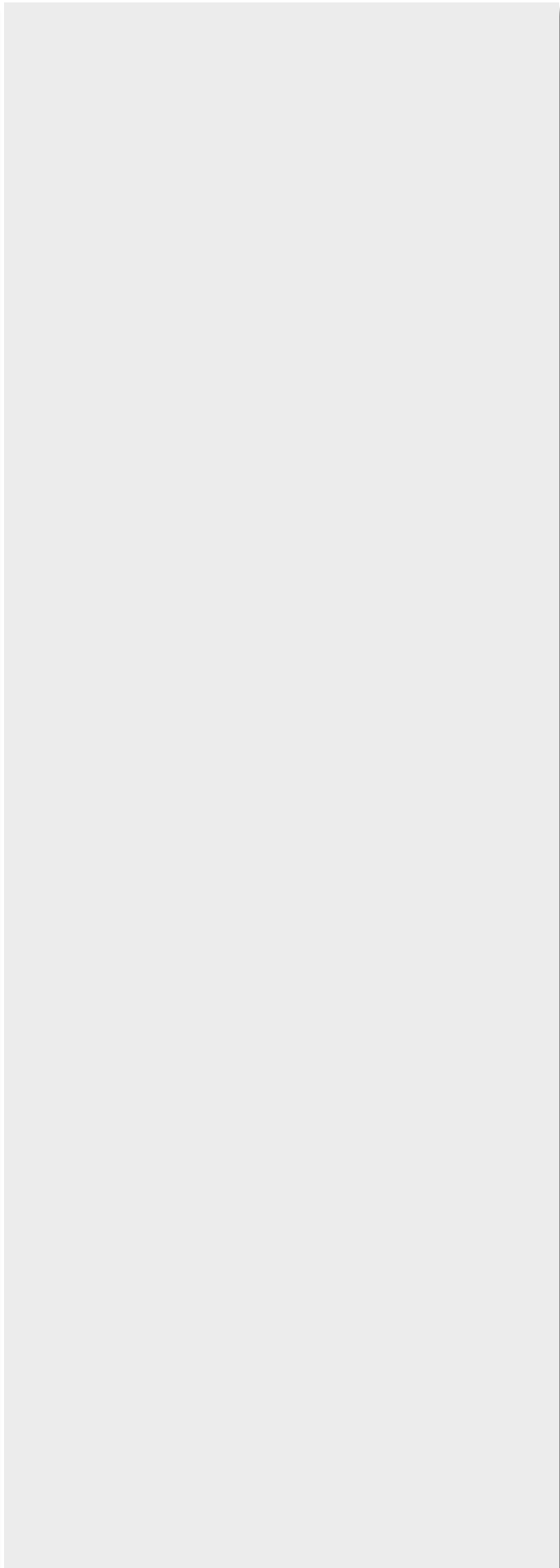
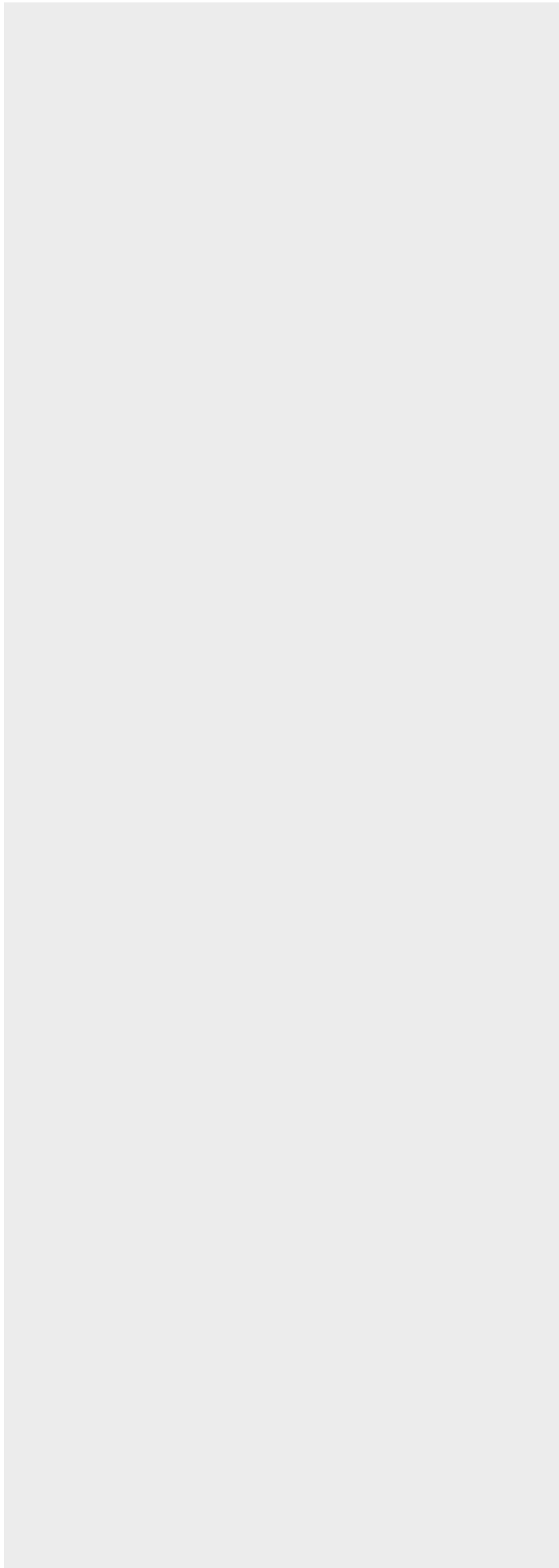
Detailed information:

- ZVEI position paper „UGR method - application and limits“.
www.schuch.de/de/Positionspapier-UGR_ZVEI
- Statement „Glare assessment in industrial lighting“ by Prof. Dr. Bruno Weis,
Technical Manager Adolf Schuch GmbH
www.schuch.de/de/Blendungsbewertung-Industriebeleuchtung_Weis

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B. Weis, G. Finke: Emergency and safety lighting, Hüthig & Pflaum-Verlag.
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Volume 1: Fundamentals - Standards - Regulations ISBN 978-3-8101-0370-3
Volume 2: Installation regulations - Applications ISBN 978-3-8101-0391-8



Summary of the products

Series	Page	Series	Page	Series	Page	Series	Page
107...	113-114	167... MA (emergency)	277	BELLA - VARIO (564/565)	233-236	LIMAS Line PRO	14-15
107... H50	116	167... T40 / H50 (FR)	107	CAMINO - VARIO/RFL (47...)	175-182	LIMAS Line PRO (emergency)	266
107... LW	114	167... VARIO ZB (emergency)	277	CAMINO - VARIO/RFL (48...)	168-174	LUCA (46... G2)	189-190
110...	115-116	185...	118-120	CAPA - VARIO (541... G2)	221-224	LUXANO 2 (FR - 167... G2)	103-108
130/131... (FR)	112	190...	117	CILA - VARIO (558... G2)	217-220	LUXANO 2 (emergency)	276-277
131... (emergency)	280-281	3301/3302...	130-133	Control components	261	nD822...	56-57
131... W MA (emergency)	281	3302... V	136	LIMAS Air AREALO		nD8301/02...	58-59
131... ZB (emergency)	281	3302... VARIO	134-135	CUPINA - VARIO 556... G2)	209-212	nD8611...	54-55
142...	121	3305...	137-138	DUEVO MID (3301/3302)	130-133	nD866...	48-50
144...	95-96	3401/3402... G2	142-144	DUEVO XL MID (3305)	137-138	nD866... DIMD	49
144... AUS	96	3403...	145-147	DV	65	nD866... H..	49
161... MA (emergency)	273	3405...	148-149	DV (FR)	124	nD867...	51-53
161... ZB (emergency)	273	3410/3420/3430...	139-141	e821...	40-41	nD8700...	60-61
161/162... AUS (FR)	88	3610...	109	e821... DIMD	41	nD8700... A	61
161/162... ER / HR (FR)	90	3611... (emergency)	282-283	e840...	34-35	nD8800...	62-63
161/162... FF / FC (FR)	91	3611... MA (emergency)	282	e840... PM	35	nD8800... A	63
161/162... H50 (FR)	87	3611... ZB (emergency)	283	e855...	36-37	PENDO - VARIO/RFL (49...)	197-202
161/162... IFS / LM (FR)	88-89	3611... (FR)	110	e856...	38-39	PENDO - VARIO/RFL (59...)	191-196
161/162... SENS (FR)	86	42... VARIO	185-186	e864...	32-33	PLANEO - VARIO (557... G2)	213-216
161/162... T40 (FR)	87	42... VARIO M	187-188	e865...	29-31	Pole arm carriers	262
161/162... T40 / H... (FR)	87	42AL... VARIO	183-184	e865... DIMD	30	Pole-top brackets	263
161/162... TB (FR)	87	4210	66	e865... H..	30	PRIMO XR (107...)	113-114
161/162... VARIO (FR)	92-94	4216	66	e865... T40	30	PROXIMA (FR - 161PX...)	72-83
161/162... (FR)	84-94	46... G2 VARIO	189-190	e8820...	44-45	PROXIMA (emergency-161PX...)	268-269
161/162... RLED/OV	102	47...	175-182	e8820... DIMD	45	Reducing adapters (AU)	263
161... (NOT)	272-273	48...	168-174	e8825...	42-43	RETRO - VARIO (543... G2)	225-228
161PX... AUS (FR)	77	49...	197-202	e8825... DIMD	43	RETRO Z - VARIO (553 G2)	229-232
161PX... CS (FR)	76	51...	154-160	e9310...	47	RFL light fittings	21-22
161PX... ER / HR (FR)	80	52...	161-167	e9312...	46	SEGURO (142...)	121
161PX... H50 (FR)	76	541... G2	221-224	ExDUEVO (nD8301/02...)	58-59	TRIANO disc (3410/3420/3430)	139-141
161PX... H50 MA (emergency)	270-271	543... G2	225-228	ExeLED 1 (e865...)	29-31	TRIANO G2 (3401/342 G2)	142-144
161PX... IFS / LM (FR)	77-78	544... G2	203-208	ExeLED 1 N (e864...)	32-33	TRIANO L (3403...)	145-147
161PX... MA (emergency)	269	553... G2	229-232	ExeLED 2 (nD866...)	48-50	TRIANO XL (3405...)	148-149
161PX... SENS (FR)	75	556... G2	209-212	ExeLED 2 N (nD867...)	51-53	TRS 1000 (FR)	123
161PX... T40 (FR)	76	557... G2	213-216	ExFOCO L (nD8700...)	60-61	TRS 2000 (EX)	64
161PX... T40 / H... (FR)	76	558... G2	217-220	ExFOCO XL (nD8800...)	62-63	TRS 2000 (FR)	122
161PX... VARIO (FR)	81-83	564/565... G2	233-236	ExGLOBE (e9312...)	46	TUBEO (110...)	115-116
161PX... ZB (emergency)	269	59...	191-196	ExSPECT (e9310...)	47	VIA - VARIO / RFL (51...)	154-160
161PX... (emergency)	268-269	7600... / 7600... A	237-238	ExSTREAM (e8820...)	42-43	VIA - VARIO / RFL (52...)	161-167
161PX... (FR)	72-83	7600... RFL	239-240	ExSTREAM (e8825...)	44-45		
163... G2 MA (emergency)	275	7700... / 7700... A	241-242	FILOS VARIO (42...)	183-188		
163... G2 ZB (emergency)	275	7700... RFL	245-248	FOCO L (7700...)	150		
163/164... G2 (FR)	97-101	7700... SSK	150	FOCO L (7700... SSK)	241-242		
163/164... H50 (FR)	100	7700... VARIO	243-244	FOCO L RFL (7700...)	245-248		
163/164... IFS (FR)	100	7800... / 7800... A	249-250	FOCO VARIO (7600...)	237-238		
163/164... SENS (FR)	99	7800... RFL	253-250	FOCO VARIO RFL (7600...)	239-240		
163/164... T40 (FR)	100	7800... SSK	151	FOCO XL (7800... SSK)	151		
163/164... RLED/OV	102	7800... VARIO	251-252	FOCO XL (7800...)	249-250		
163... G2 (emergency)	274-275	7850... MA...	259	FOCO XL RFL (7800...)	253-250		
164 KL... (emergency)	278-279	7850... ME...	258	KONIC - VARIO / RFL	203-208		
164 KL... MA (emergency)	278	7850... SP	257	LIMAS	17-20		
164 KL... ZB (emergency)	279	7850... SP OV	258	LIMAS Air	8-11		
164KL... G2 (FR)	111	8040	67	LIMAS Air (FR)	70		
167... AUS / VARIO (FR)	104	8118	67	LIMAS Air (HAL)	128		
167... ER DIMD (FR)	108	AL	64	LIMAS Air for sports facilities	23-24		
167... G2 (FR)	103-108	AL (FR)	123	LIMAS Line	12		
167... G2 (emergency)	276-277	AREALO (7850...)	256-259	LIMAS Line BASIC	13		
167... HE CS (FR)	107	AREALO external pole mounting	259	LIMAS Line BASIC/PRO (FRL)	71		
167... HE VARIO (FR)	104	AREALO internal pole mounting	258	LIMAS Line BASIC/PRO (HAL)	129		
167... IFS / VARIO (FR)	105	AREALO SP	257	LIMAS Line ESC	16		
167... LW (FR)	107	AREALO SP OV	258	LIMAS Line ESC (emergency)	267		

**With passion for
excellent lighting – since 1895!**



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