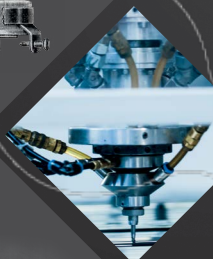


# PRODUCT CATALOGUE

## LED Light Fittings

# 2020/21



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

**125**  
YEARS



**SCHUCH**

1895 – 2020

## Table of Contents

### SCHUCH - The Company

Chronicle	2-3
All under Control	4
Quality	5
Sustainability	5

### Lightmanagementsystem 6-13

LIMAS-light fittings	9
RFL-light fittings	10-11
LIMAS Line PRO	12
LIMAS Line BASIC	13

### LED Explosion Protected Fittings Zone 1/21 16-31

Light fittings with diffusers	16-27
Floodlights	28-29
Ceiling- or Wall-mounting light fitting	30
Handlamp	31

### LED Explosion Protected Fittings Zone 2/22 32-45

Light fittings with diffusers	32-39
High Bay Light Fittings	40-41
Floodlights	42-45

### Ex-Protected Installation Components 46-49

### LED Dust-/Waterproof Light Fittings 50-83

Light fittings with diffusers	52-70
Oval shaped light fittings	71
Tubular Light Fittings	72-74
Tubular fitting	75-76
Sheet steel light fittings	77-79
Vandal proof light fittings	80
Mounting rails/through wiring systems	81-82

### LED High Bays 84-101

2-point-mounting	86-91
1-point-mounting	92-101

### LED Outdoor Light Fittings 102-163

Technical outdoor fittings	104-124
Decorative outdoor light fittings	125-140
Plane surface floodlights	141-152
Floodlights	153-160
Pole arm carriers and pole-top brackets	161-162

### LED Emergency Light Fittings 164-177

### Technical Attachment 178-180

### Summary of the products 181





# 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 m<sup>2</sup>.

### 1962

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

### 1964

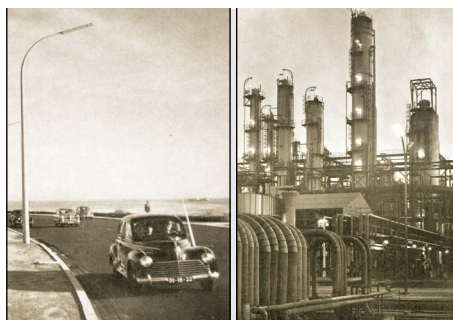
The production was mostly moved into a new modern plant in the Mainzer Strasse in Worms, which included GRP pressing, mechanical workshops and a fully automatic powder-coating line.

### 1969

New plant expansion to the total of 40,000 m<sup>2</sup>. SCHUCH achieved a deep vertical integration and extensive technologies for design and production of highly-protected technical light fittings.

### 1973

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.

#### 1986

Production of first waterproof light fittings completely made of polycarbonate.

#### 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.

#### 1999

The production area of explosion-proof luminaires is subject to particularly strict monitoring by the Physikalisch Technische Bundesanstalt (PTB). In an audit, the SCHUCH quality management system is tested and certified according to the new standard DIN EN / IEC 80079-34.

#### 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.



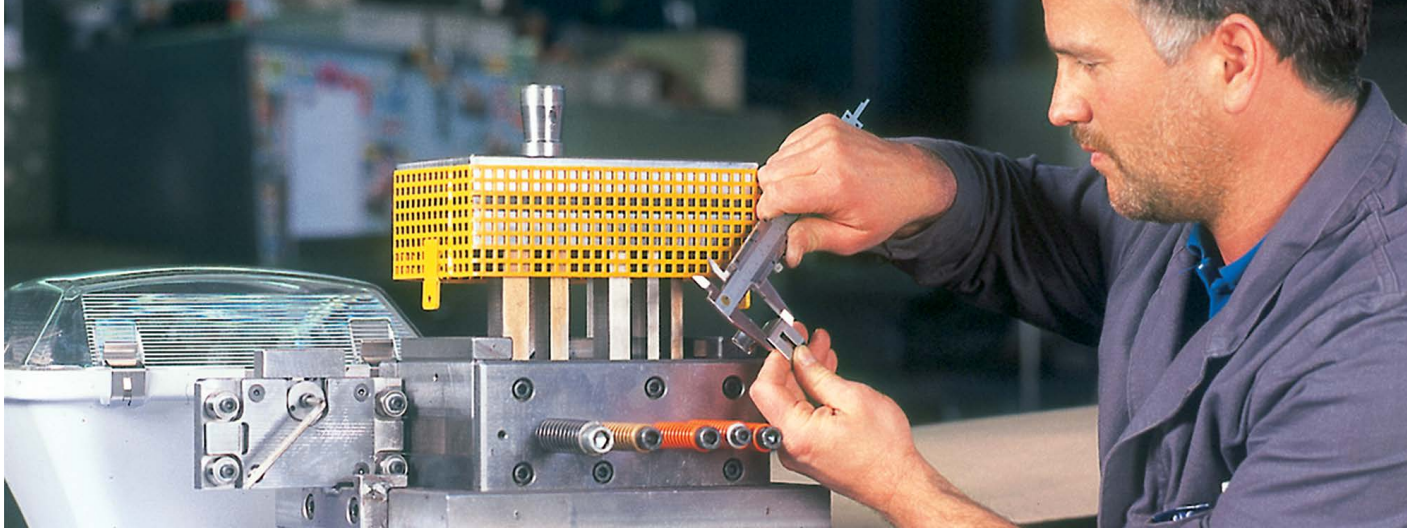
#### 2019

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 a passion for good light!





# ***SCHUCH: Quality, Consistency, Future-oriented***

## **EVERYTHING IS UNDER CONTROL**

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.

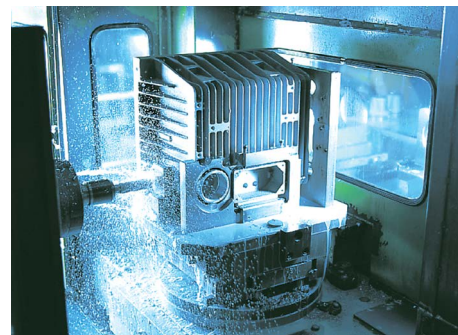
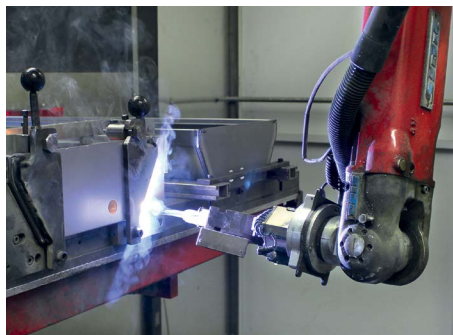
Both light fittings and their components and materials are thoroughly tested in our accredited measuring laboratories.

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 Electro-magnetic 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/IEC 80079-34**. The routine surveillance audits have been successfully carried out and reconfirmed by a certificate since 1999.

In recognition of the high quality of delivered products, SCHUCH was awarded, in 2009 for the first time, the **Quality Certificate according to KTA 1401** as a certified supplier to all large German power plants. For illumination of power plants, SCHUCH is the absolute market leader.

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 distinctive.



## COMMITTED TO ENVIRONMENT PROTECTION

As a manufacturing company, SCHUCH is always aware of its eco-political responsibility.

As a family business with a history spanning more than 125 years, we do not think in quarters but in generations - accordingly our actions are consistently geared towards the **principle of sustainability**. Through responsible use of scarce resources and the development of sustainable products, we make our contribution to environmental protection for a future worth living in today and subsequent generations.

SCHUCH lights are designed for maximum energy efficiency and maximum service life.

Through the use of light management systems for situation-based control of the light as well as VARIO luminaires for individual optimal adjustment of the luminous flux, further energy saving potential can be gained.

SCHUCH lights are not **single-use products**. If necessary, all installed components can be replaced by skilled workers in order to avoid unnecessary waste and to conserve valuable resources. The only exception is the gas-tight PRIMO XR series, which must be hermetically sealed due to the application.

All SCHUCH products meet the **REACH and ROHS requirements**.

For ensuring a professional disposal of the packing material and of old equipment, SCHUCH is connected to the **INTERSEROH Recycling System and Green Dot - Dual System Germany (DSD)**.

Thanks to the extensive use of Zhaga-compliant LED modules, SCHUCH lights are **future-proof**. A manufacturer-neutral replacement is just as possible as a replacement by Zhaga-compliant subsequent generations without having to replace and dispose of the entire luminaire.

In **regular energy audits** at our site, plants and manufacturing processes are intensively examined and assessed with regard to potential energy savings. The energetic renovation of the main building and the investment in a new powder coating system designed according to moderate, environmentally friendly aspects are just two examples of the resulting sustainable improvement.





## *Light on Demand by intelligent lighting control*

**Light only where it is needed and only as long as it is required. In this way, the efficiency potential of LED technology can be optimally exploited and a maximum of energy costs can be saved. With the LIMAS light management system from SCHUCH, lighting on streets, squares, cycle paths and in production and storage halls becomes extremely efficient and controlled comfortably!**

Intelligent components built into the light fittings automatically generate a wireless network to communicate with each other. As desired, or when motion is detected, they can either turn up a dimmed lighting level or return it to a pre-set background level.

LIMAS is available in two different system versions. As an autarkic solution, in which the programming and any subsequent adjustments take place on site via PC and USB dongle, or with central monitoring and control of the light fittings via PC and gateways in the field.

With both versions up to 250 light fittings can be controlled per gateway or USB dongle. The gateway version also enables proactive, targeted maintenance and troubleshooting through automatic failure notification and location display of the light fittings.

A lighting network can thus be monitored, controlled, measured and operated efficiently, flexibly and with a high level of information.

### **When does it make sense to use it?**

General energy cost savings using Light on Demand.

For specific usage profiles, e.g. to accommodate temporary city-centre events (public events like markets, festivals etc.), if you want the lighting level to drop later on or not at all.

With different profiles in different city areas (e. g. residential areas, industrial zones, the old town area, and conflict zones or social flashpoints).

### **Benefits**

- (G)+(D) - optimised energy savings through light on demand
- (G)+(D) - easy cost control through energy consumption metering
- (G) - evaluation and export of selected/stored lighting data from the data base from afar
- (D) - evaluation and export of selected/stored lighting data from the data base locally on site
- (G) - proactive, targeted maintenance and failure elimination through the light fittings' automatic failure reporting and location display
- (G)+(D) - user-friendly interface with graphic display of the light fittings' operating status, energy consumption, function and location
- (G)+(D) - 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
- (G)+(D) - safety thanks to system-wide encryption with PIN code protection
- (G)+(D) - central control and (with (G) automatic) monitoring of every single light point
- (G)+(D) - no additional wiring required

(G) = Solution with gateway and server (D) = Solution with USB dongle

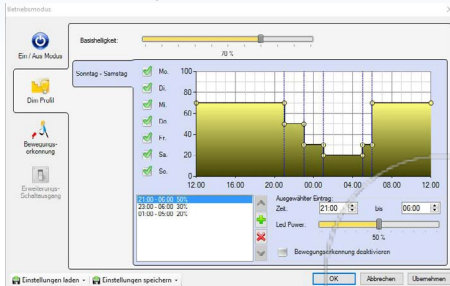
## System functions

- 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

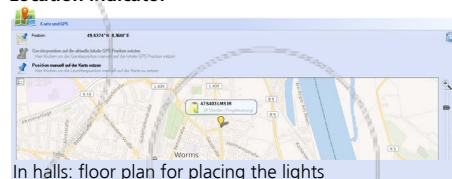
### Setup of dimming profiles



### Energy consumption indicator



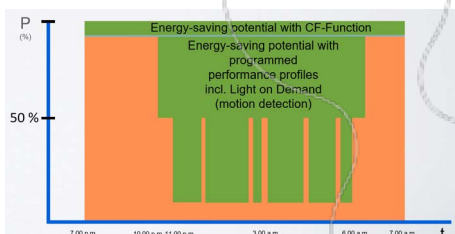
### Location indicator



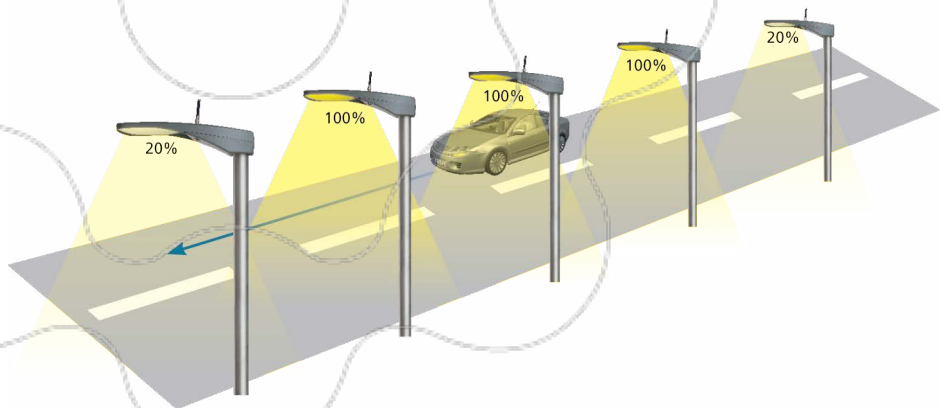
## Light on Demand

If a road user enters the road, the motion sensors, integrated or retrofitted in the light fittings (RFL accessory), detects the movement and the dimmed light fittings automatically adjust to the programmed lighting level. The signal is transmitted wirelessly from

light fitting to light fitting, so that all light fittings increase their lighting level too - light accompanies the road user dynamically. After a programmed hold period, the light fittings automatically return to the pre-set dimming level.



The graphic on the right is only an example, which can also take place on squares, bike paths or in halls and in relation to people, animals, etc.



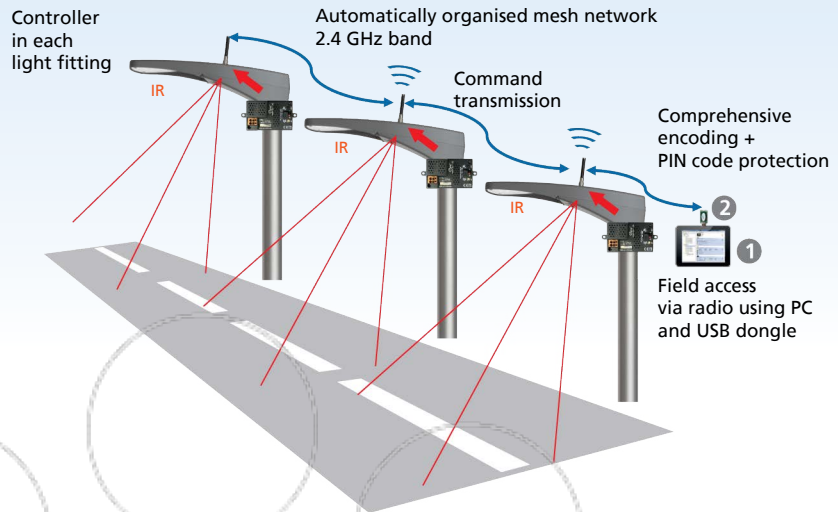


## System versions

### With USB dongle and software

The light fittings can be operated independently without a server. Programming and any subsequent adjustments, are done on site using a PC and 1 USB dongle 2.

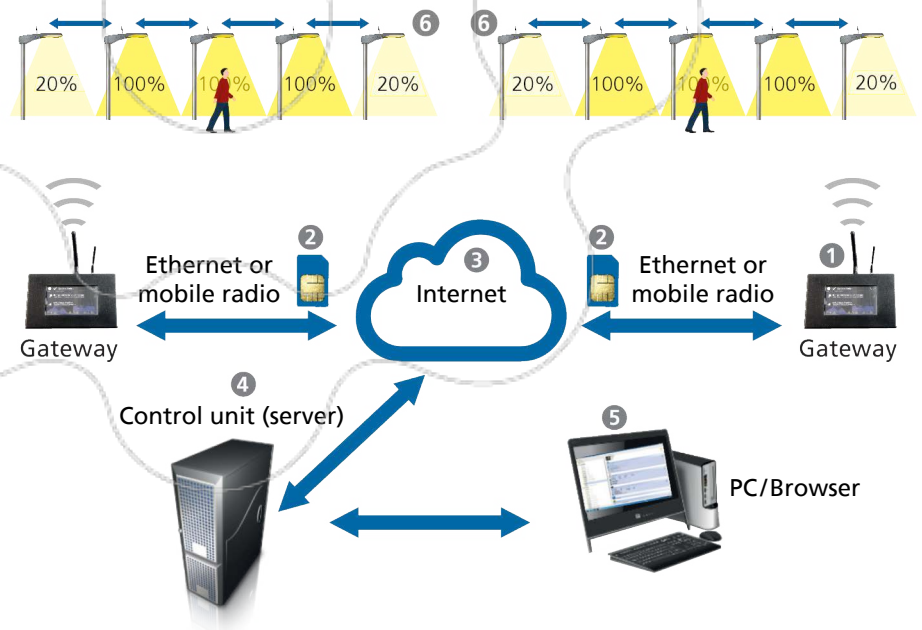
Up to 250 light fittings can be controlled and read out by each USB dongle.



### With gateway

The gateways 1, are installed in switch cabinets within radio range of the light fittings and communicate via mobile network or ethernet 2 and internet 3 with the server 4. The light fittings in the field 6 can be controlled with the server and a PC 5.

The server collects the data from the gateways and provides access to the system functions via a web / browser application 5, so the light fittings can be monitored, checked and controlled.



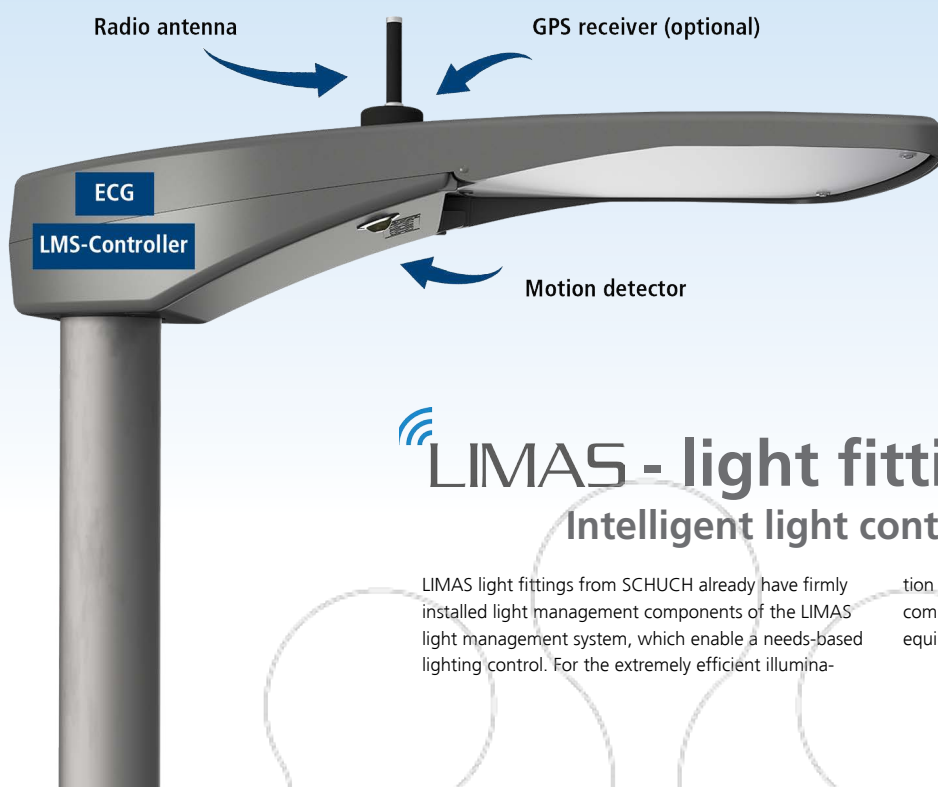
Up to 250 light fittings can be controlled per gateway. Since several gateways can be combined, there is theoretically no limit to the number of light fittings in an installation.

## Control components

Type	
<b>USB dongle+software and license</b>	for subsequent adjustment of factory programming and light control in the field, including energy consumption display
<b>Gateway*</b>	for remote monitoring and control of light fittings from afar with a SIM card via the mobile network or Ethernet (LAN / WLAN) including data logging functionality

\* An annual hosting fee applies to the gateway.





## LIMAS - light fittings

### Intelligent light control right from the start

LIMAS light fittings from SCHUCH already have firmly installed light management components of the LIMAS light management system, which enable a needs-based lighting control. For the extremely efficient illumina-

tion of streets, squares, bike paths or halls, no other components need to be installed - the light fittings are equipped with all desired components ex factory.

#### In general the following LIMAS - versions are possible:

- LMS IR: with infrared sensor for light on demand
- LMG: with GPS antenna used for precisely timed dimming in connection with autonomous operation without gateway

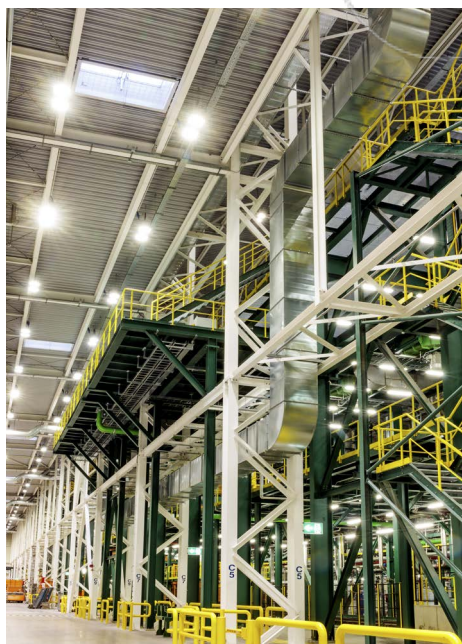
#### Optional:

Factory programming of performance profiles according to customer requirements  
(time-dependent dimming without gateway requires at least one light fitting type LMG)

#### Accessories:

- Sensor box: external box, networked with the light fittings, to accommodate various components:  
SB LMG - with GPS / SB LMP - with photocell (photoelectric switch) / SB LMS IR - with infrared motion detector / SB LMS LS - with light barrier / SB LMS SF - for switch
- Switch: wireless without a battery

Combinations and other types on request.



#### Available light fittings in LIMAS - version

pole-mounted light fittings 47, 48, 541, 543, CUPINA (556), PLANE0 (557)

rope-supported light fittings 49, 59

plane surface floodlights 47A, 48A, 7800A

high bay light fittings DUEVO (33..)

The SCHUCH light fitting range is continuously being extended.  
Further series on request

status march 2020





## RFL - light fittings

### Ready for the future

**NEW**

When is the right time to implement a light management system? Right at the replacement of the conventional lighting installation, or should one rather wait a few more years? Perhaps financial resources are not available at the time of the replacement, or one might want to start with a small test installation to gain experience. There is no unique answer to this question. But no

matter how you decide, one thing is for sure: if standard light fittings have been installed, a simple backfitting or conversion to a light management system is no longer possible.

At this point the concept of „Ready for Light Management Systems“ (RFL) comes in!

### Ready for Light Management Systems

#### You have the choice - you determine the timing!

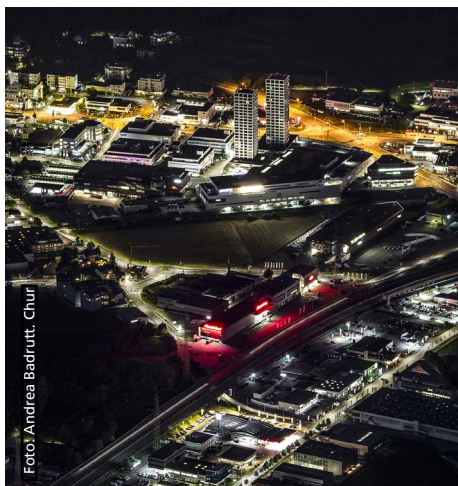
The Ready for Light Management Systems (RFL) light fittings keep all options open and are prepared for retrofitting sensors and light management components. One or two Zhaga-compliant sockets integrated in the housing enable the subsequent, tool-free installation of the necessary components such as controllers, radio antennas and sensors. The use of autonomous sensors without connection to a light management system is also possible at any time.

Due to standardization the sockets according to Zhaga Book 18, you are not tied to a specific light management system. You can freely choose from all manufacturers who also use standardized Zhaga socket connections. If you choose the LIMAS System, RFL light fittings with HUB can also be combined with LIMAS light fittings. The underlying system of the light fittings is then the same - installed permanently (LIMAS) and retrofitted with HUB on site (RFL).

Light on demand is not only extremely comfortable, but also enables to exploit the full efficiency potential of the LED technology.

### 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
- standardized Zhaga-compliant sockets allow a free choice of the light management system
- In case of using the LIMAS light management system, LIMAS light fittings and RFL light fittings (equipped with HUB) can be combined easily



### In general the following RFL - 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 components for backfitting)
- RFLU: with Zhaga socket at the bottom of the housing for subsequent retrofit of sensors to control the light fittings self-sufficient (see components for backfitting)
- RFL0U: with Zhaga socket at top and bottom of the housing. Thus it's possible to retrofit both, light management components and sensors (see components for backfitting)

Further types on request.

To control the light fittings after retrofitting the corresponding light management system software as well as possibly further components are necessary (see control components).



RFLU with mounted HUB (top - O)  
and unequipped socket (bottom - U)

## Available light fittings in RFL - version

pole-mounted light fittings	47, 48, 49, 541, 543, 553 KONIC (544), CUPINA (556), PLANE0 (557)
plane surface floodlights	47A, 48A
floodlights	7600, 7800
high bay light fittings	DUEVO (33..), TRIANO (34..)

The SCHUCH light fitting range is continuously being extended.  
Further series on request

status march 2020

## Components for backfitting

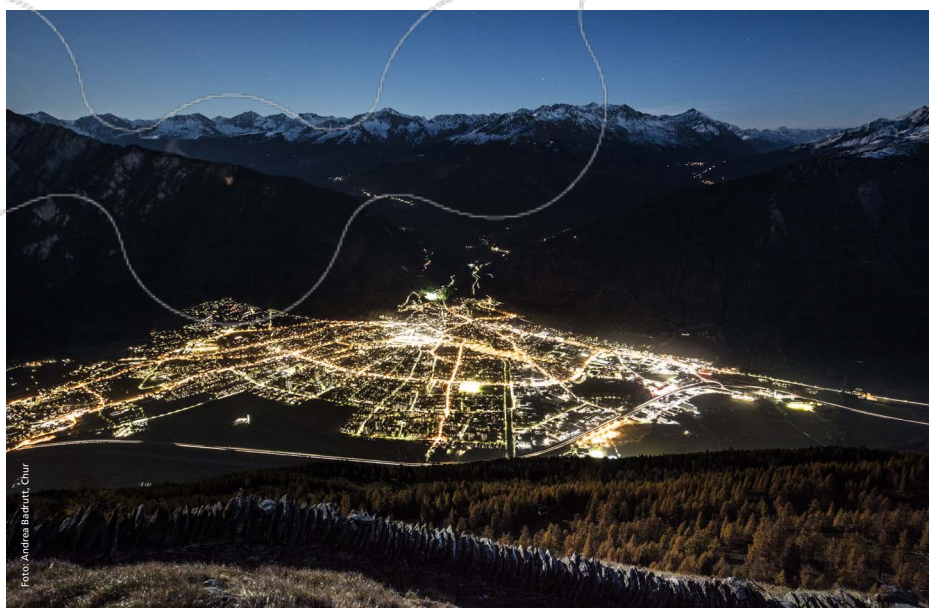
Type	
<b>Controller</b>	light management system unit e.g. consisting of LMS-controller, antenna and photocell
<b>motion detector</b>	infrared sensor for motion detection (Light on Demand)
<b>photoelectric switch</b>	sensor for brightness detection (Light on Demand)


Other sensors e.g. environmental sensors (fine particle sensor, CO<sub>2</sub> sensor, weather station) on request.

## Control components

Type	
<b>USB dongle+software and license</b>	for subsequent adjustment of factory programming and light control in the field, including energy consumption display
<b>Gateway*</b>	for remote monitoring and control of light fittings from afar with a SIM card via the mobile network or Ethernet (LAN / WLAN) including data logging functionality

\* An annual hosting fee applies to the gateway.



More than 2,500 SCHUCH light fittings of the 47 and 48 series ... with the  LIMAS light management system 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.



# LIMAS - Line PRO

## wired light control - intelligent and on demand

NEW



Individual needs, different activities in a room as well as changing times of day and seasons pose great challenges for lighting. Controllable light is advantageous in several ways. Because it not only creates ideal conditions for flexible use of space, but also focuses in particular on the different needs of people. LIMAS Line PRO enables fully automated, dynamic light and maximum individuality. Sensors register any deviation from the predefined values and report this to the controller, which responds immediately. If, for example, the proportion of daylight changes, the lux value of the artificial light is adjusted accordingly. Switching on and off during presence and

absence is also fully automated. It is possible to link the light settings of different zones and rooms with each other. The user himself is not aware of the lively communication between sensors and controllers. All he perceives is a need-based, constant illuminance that is always activated where and when he needs it. The LIMAS Line PRO light management system is controlled and configured via a PC without additional software; a browser is sufficient. You can use two different versions and either establish a peer-to-peer connection between a PC and the LIMAS Line PRO or integrate the light management system into an existing network. An internet connection is not necessary to operate the system.

### When does it make sense to use it?

General achievement of energy cost savings with DALI light fittings indoors (Light on Demand)

Control and automation of general lighting using motion detectors, daylight-dependent controls or calendar functions (e.g. in shelf aisles, warehouses, car parks, office floors, etc.)

Integration and monitoring of emergency light fittings with single batteries in the general light management system

### Features and advantages

- Optimized energy savings through motion detection and daylight-dependent control (Light on Demand)
- Max. 192 ballasts - of which max. 50 single battery emergency light fittings - can be controlled and monitored per system
- Emergency light monitoring and light management possible at the same time
- User-friendly user interface for easy operation by the end user
- Intuitive installation by the assembly staff
- Calendar function for configuring day- / time-specific lighting settings (scenes)
- Conventional switches / buttons can be integrated
- Flexibility by simply changing dimming profiles and group assignments as well as simply integrating new lights into the system
- No DALI power supply required
- Integration of the light management system in a higher-level building management system (BACnet protocol)

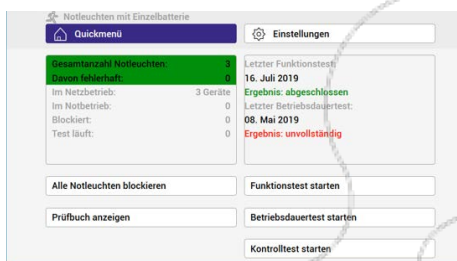


## Regulation according to needs

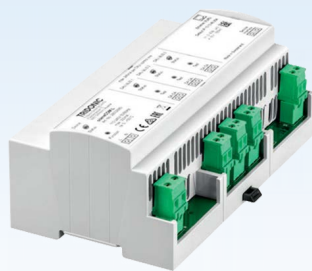
LIMAS Line PRO offers the possibility to integrate sensors. In addition to the presence-dependent control by temperature differences (PIR sensor), daylight-dependent control of the lighting can also be taken into account. Thanks to different detection areas, this is also the right solution for industrial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

## Monitoring of single battery emergency light fittings

If additional emergency light fittings with a single battery are operated via LIMAS Line PRO, their function and duration tests can be carried out at any time / day and thus central monitoring can be implemented (see DIN VDE V 0180-100-1). The results of the emergency lighting tests are documented centrally and can be exported. The emergency light fittings can be operated in the three switching modes permanent light, standby light and controlled light.



User interface using the example of emergency light monitoring

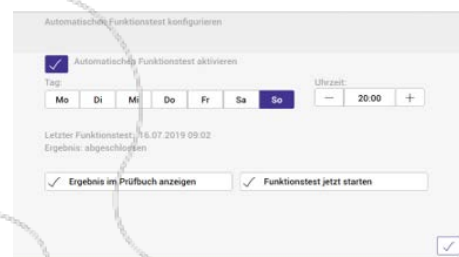


## Individual control

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.

## Automation through calendar function

A calendar function can be used to specify day-specific lighting settings (scenes). Here, both one-off events and annually repeating (holidays) can be saved. In addition to whole days, time-specific lighting settings are also possible. This makes sense if the entire lighting is to be switched to 100% during core working hours.



User interface using the example of a calendar function

# LIMAS - Line BASIC

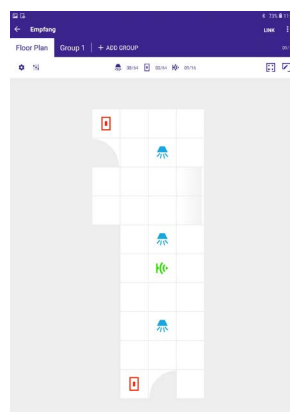
## wired light control - compact and clear



The light management system LIMAS Line BASIC offers a compact alternative to the PRO version, both technically and in terms of dimensions. It enables simple addressing and grouping of light fittings, the integration of standard push buttons and sensor-based automation.

### The main differences at a glance

- Max. 64 ballasts per system
- Configuration via a smart device (tablet / smartphone)
- Floor plan of the given room can be reproduced rudimentary and then equipped and configured with the light fittings, sensors and buttons / switches
- Sensors with higher protection class IP66
- No emergency light monitoring possible
- DALI power supply required



User interface in the app using the example of a floor plan





# 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.



### Explosionsgeschützte Leuchten für Leuchtstofflampen

Schutzart „erhöhte Sicherheit“, Zündgruppe A-D



Einzelleuchten ein- und zweiflammig  
Bandleuchten, ein- und zweiflammig

### 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

With the introduction of steep roof light fittings, small wall and ceiling mounted light fittings and the hand lamp e9310, the LED range is expanded continuously.

Product	Series	Page
<b>Light Fittings for Zone 1/21</b>		
Light fittings with diffuser Exe-Led 1	e865...	16
• for high ambient temperatures	... H..	16/17
Emergency light fittings ExeLed 1 N	e864...	18
Light fittings with diffuser with central locking system	e840...	20
Pole mounted light fittings	e840... PM	21
Compact light fittings with diffuser	e855...	22
Compact emergency light fittings	e856...	24
Steep roof light fitting	e821	26
Floodlights	d9000...	28
Ceiling- or Wall-mounting light fitting	e9312	30
Handlamp	e9310	31
<b>Light Fittings for Zone 2/22</b>		
Light fittings with diffuser ExeLed 2	nD866...	32
Emergency light fittings ExeLed 2 N	nD867...	34
Compact emergency./ escape light fittings	nD8611...	36
Steep roof light fitting	nD822	38
High bay fittings	nD8301/02...	40
Floodlights / Plane surface floodlights	nD8700...	42
	nD8800...	44
<b>Ex-Installation material</b>		
Carrier rail systems	TRS 2000	46
	AL	46
Through wiring systems	DV	47
Wall sockets	4216	48
Plugs	4210	48
Installation switches	8040	49
Junction boxes	8118	49



# ExeLed 1

## LED-Light Fitting for Ex-Zones 1/21

### 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 mm<sup>2</sup>.

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

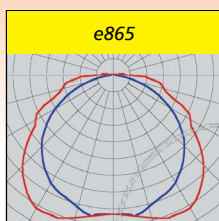
**Standard:** Facing downwards or forwards.

**Mechanical installation:**

Mounting accessories see spare parts/accessories.

#### 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:** Line modules appr. 6,500K, CRI > 80,

Lifetime: L<sub>70</sub>B<sub>10</sub> > 100.000h

L<sub>80</sub>B<sub>50</sub> > 100.000h

L<sub>90</sub>B<sub>50</sub> > 50.000h

each at max. ambient temperature, (see notes)

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

#### 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 DALI-interface for

dimming (DIMD)

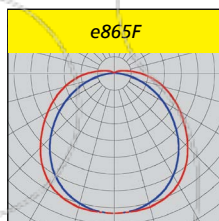
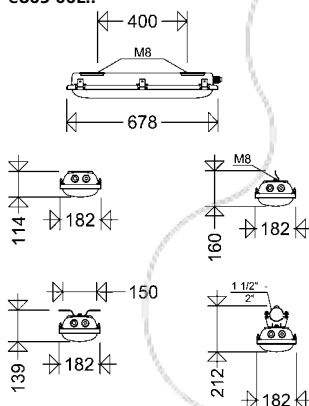
- for explosive dust atmospheres

Zone 21 (t868...)

- for higher ambient temperatures up to +70°C depending on version



e865 06L...



#### Product highlights:

- 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
- ECG and reflector with LED-modules replaceable by qualified personnel on-site

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Cover frosted	Cover clear	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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#### 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.

e865...



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:

IBExU 16 ATEX 1008

Other approvals:

IECEx IBE 16.0010

Ignition protection: eb

Marking:

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

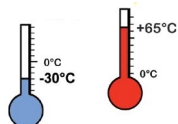
II 2 D Ex op is tb IIIC T80°C Db (Zone 21)

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

**Permissible ambient temperature:**

-30°C up to see article table

The values given are for versions with through wiring.



#### Notes:

**Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.**

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

#### for high temperature

86500 0050	e865F 06L22	15	2170	145	•	55	A++	2 x 18W	4,6
86500 0051	e865F 06L42	28	4120	147	•	55	A++	2 x 36W	4,7
86500 0052	e865F 06L60	40	5700	143	•	50	A++	2 x 58W	4,7

\* see notes

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



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Cover frosted	Cover clear	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## e865...



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

II 2 D Ex op is  
tb IIIC T80°C Db



86500 0001	e865F 12L42	28	4.360	156	•	55	A++	2 x 36W	6,7
86500 0002	e865F 12L60	40	6.020	151	•	55	A++	2 x 58W	6,7
86500 0003	e865F 12L85	54	8.620	160	•	50	A++	> 2 x 58W	7,0
86500 0011	e865 12L42	28	4.590	164	•	55	A++	2 x 36W	6,7
86500 0012	e865 12L60	40	6.320	158	•	55	A++	2 x 58W	6,7
86500 0013	e865 12L85	54	9.010	167	•	50	A++	> 2 x 58W	7,0

NEW

### for high temperature <sup>1)</sup>

86500 0910	e865F 12L42 H65	28	4.360	156	•	65	A++	2 x 36W	6,7
86500 0902	e865F 12L60 H65	40	6.020	151	•	55	A++	2 x 58W	6,7

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

<sup>1)</sup> through-wiring or looping the cable is not permissible.

### e865 12L..

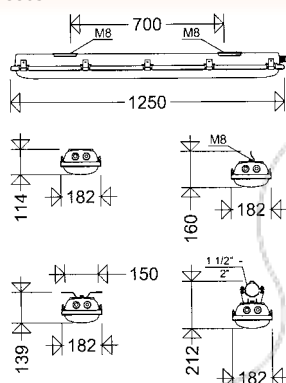


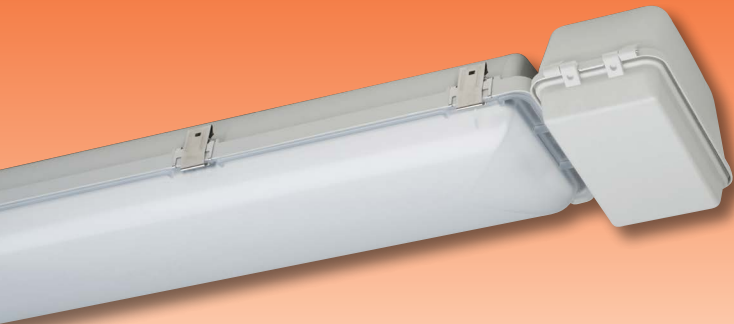
Photo: BASF

Explosion protected  
Light Fittings

## Accessories / Spare Parts

Article No.	Type	
<b>Spare diffusers</b>		
86601 9001	8654F	PC, frosted
86601 9014	8652F	PC, frosted
86601 9000	8654	PC, clear
<b>Fasteners</b>		
90055 9004	KE/KES VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.)
<b>Glands/ breather</b>		
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
90259 9000	Klimastutzen EX	M25 x 1,5
<b>Mounting material</b>		
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
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0004	W26 P	2 wall mounting angles
26000 0002	W26/30 P	2 wall mounting angles 30°
26000 0003	W26/45 P	2 wall mounting angles 45°





## 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 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 encapsulated LED-modules, clipped into the cover, suspendable.

**Connection:** 4 poles up to 4mm<sup>2</sup>.

**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. Sealing gaskets for direct ceiling mounting are included.

#### Technical Data:

**LED:** Line modules ca. 6,500K, CRI > 80, Lifetime  $L_{70B_{10}} > 100.000h$ ,  $L_{80B_{50}} > 100.000h$  at max. ambient temperature (see notes)

**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:

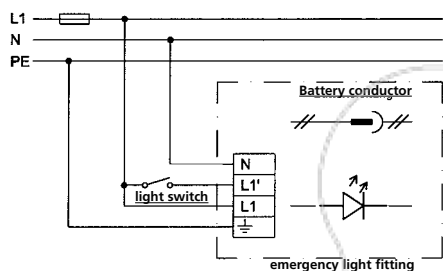
**maintained operation** = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

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

#### Options:

- 4.500K, light colour 845
- Emergency lighting unit with DALI-interface for dimming and

- central monitoring (DIMDI)
- inhibiting facility

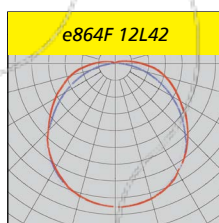
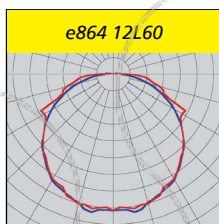


#### Starting:

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
- ECG and reflector with LED-modules replaceable by qualified personnel on-site

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [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]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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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.

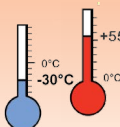
## e864...



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



#### EC-Type Examination Certificate:

IBExU 17 ATEX 1026

Other approvals:

IECEX IBE 17.0016

Ignition protection: ec

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)

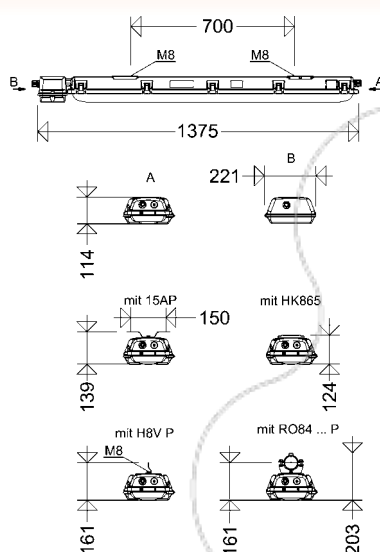
Rated voltage: 220-240V AC, 50-60Hz.

Permissible ambient temperature:

-30°C up to +55°C

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

#### e864 12L... (with battery box)



86400 0001	<b>e864F 12L42/1/1,6</b>	29	4.360	750	150	•	•	•	55	A++	2 x 36W	7,6
86400 0002	<b>e864F 12L60/1/1,6</b>	41	6.020	750	147	•	•	•	55	A++	2 x 58W	7,6
86400 0101	<b>e864F 12L42/3/4</b>	29	4.360	750	150	•	•	•	55	A++	2 x 36W	8,0
86400 0102	<b>e864F 12L60/3/4</b>	41	6.020	750	147	•	•	•	55	A++	2 x 58W	8,0
86400 0011	<b>e864 12L42/1/1,6</b>	29	4.590	800	158	•	•	•	55	A++	2 x 36W	7,6
86400 0012	<b>e864 12L60/1/1,6</b>	41	6.320	800	155	•	•	•	55	A++	2 x 58W	7,6
86400 0111	<b>e864 12L42/3/4</b>	29	4.590	800	158	•	•	•	55	A++	2 x 36W	8,0
86400 0112	<b>e864 12L60/3/4</b>	41	6.320	800	155	•	•	•	55	A++	2 x 58W	8,0

\* see notes

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



## Accessories / Spare Parts

Article No.	Type	
<b>Spare batteries</b>		
90222 9021	<b>AKKU 2627 4,0Ah</b>	Spare battery 4.0Ah
90222 9023	<b>AKKU 8020 1,6Ah</b>	Spare battery 1.6Ah
<b>Spare covers</b>		
86601 9001	<b>8654F</b>	PC, frosted
86601 9000	<b>8654</b>	PC, clear
<b>Glands/breather</b>		
90117 9006	<b>2537 G</b>	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	<b>2538 G</b>	ex-protected plastic plug M25 x 1,5 with nut
90259 9000	<b>Klimastutzen EX</b>	M25 x 1,5
<b>Mounting material</b>		
86501 9003	<b>HK 865 P</b>	2 retaining clips for variable mounting distances
90001 0002	<b>H8V P</b>	2 suspensions brackets, stainless steel
90000 0002	<b>15A P</b>	2 ceiling brackets, hot galvanized steel
90032 0002	<b>15AV P</b>	2 ceiling brackets, stainless steel
90037 0004	<b>RO84 112 A P</b>	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	<b>RO84 2 A P</b>	2 pipe clamps 2", stainless steel, with support
26000 0004	<b>W26 P</b>	2 wall mounting angles
26000 0002	<b>W26/30 P</b>	2 wall mounting angles 30°
26000 0003	<b>W26/45 P</b>	2 wall mounting angles 45°



## 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 mm<sup>2</sup>.

**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, lifetime

$L_{70B_{10}} > 100,000h$

$L_{80B_{50}} = 100,000h$

at max. ambient temperature

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

### Options:

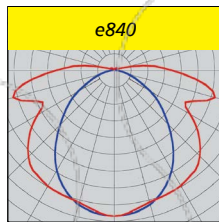
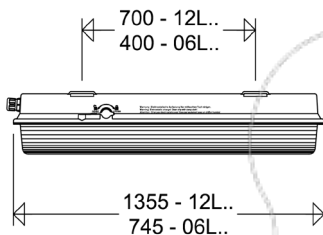
- 4.500K, light colour 845
- for connection to group or central battery (light fittings of version ZB only) or emergency mains respectively
- with monitoring module for monitoring the individual light fitting

- Control gear with DALI-interface for dimming (DIMD)
- with through-wiring 5 x 2,5mm<sup>2</sup>
- for higher ambient temperatures up to +65°C depending on version

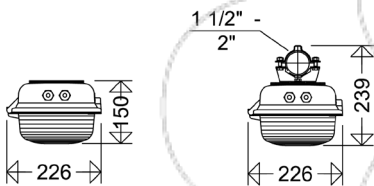


### Note:

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.

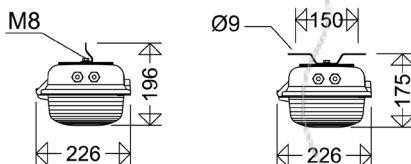


### Pipe clamp mounting



### Suspension eyes H8V

### Ceiling brackets 15A



### 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
- ECG and reflector with LED-modules replaceable by qualified personnel on-site



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Ta max [°C]	Energy efficiency class	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  
IIC T80°C Db

IP66



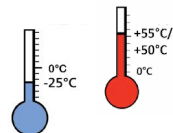
### EC-Type Examination Certificate:

IBExU 19 ATEX 1135

### Other approvals:

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 IIC 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

### 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.

### Notes:

**Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.**

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

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

\* see notes

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

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Ta max [°C]	Energy efficiency class	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

EC-Type Examination Certificate:

IBExU 19 ATEX 1135

Other approvals:

IECEX-Nr. IBE 19.0027

Ignition protection: eb

Marking:

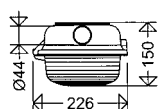
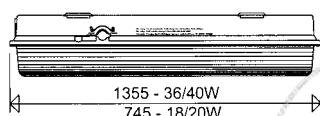
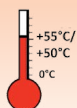
II 2 G Ex eb mb op is q IIC T4 Gb (Zone 1)

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)

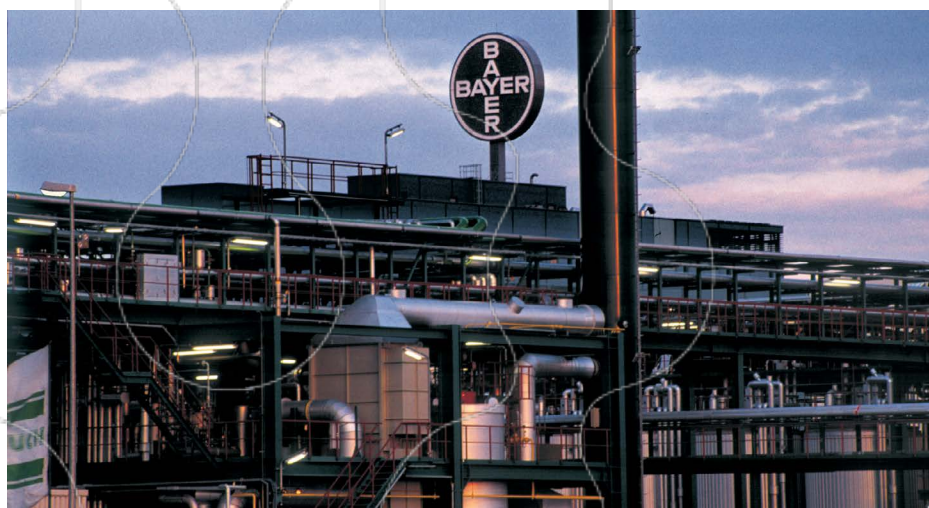
Permissible ambient temperature:  
-25°C up to see article table



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

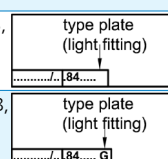
\* see notes

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



### Accessories / Spare Parts

Article No.	Type	
<b>Spare diffuser</b>		
84001 9006	<b>8402 SIL</b>	for e840 06L... manufactured until 2018, please see type plate of light fitting: article no. without "G" at the end
84001 9007	<b>8402 SIL G</b>	for e840 06L... manufactured from 2018, please see type plate of light fitting: article no. with "G" at the end
84001 9004	<b>8404 SIL</b>	for e840 12L...
<b>Cable glands/ breather</b>		
90117 9000	<b>2537</b>	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9000	<b>2538</b>	ex-protected plastic plug M25 x 1,5 with nut
90259 9000	<b>Klimastutzen EX</b>	breather M25 x 1,5
<b>Mounting material</b>		
90001 0002	<b>H8V P</b>	2 suspensions eyes with bolts, stainless steel
90000 0002	<b>15A P</b>	2 ceiling brackets, hot galvanized steel
90032 0002	<b>15AV P</b>	2 ceiling brackets, stainless steel
90000 0011	<b>84 AA</b>	1 pair of brackets, stainless steel, for compensating the different mounting distances of types e840 / e152 or e841 / e148
90037 0004	<b>RO84 112 A P</b>	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	<b>RO84 2 A P</b>	2 pipe clamps 2", stainless steel, with support
26000 0008	<b>W 26/L P</b>	2 wall mounting angles
26000 0002	<b>W 26/30 P</b>	2 wall mounting angles 30°
26000 0003	<b>W 26/45 P</b>	2 wall mounting angles 45°





## 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:** white, detachable, carrying the encapsulated LED-modules and

protection cover.

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

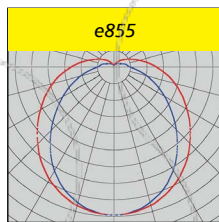
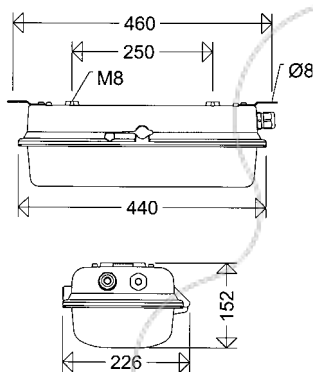
**Connection:** Prepared for looping the mains cable. Terminal L1+N+PE; up to 2,5mm<sup>2</sup>.

**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.

### 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:** Line modules appr. 6,500K, CRI > 80,

lifetime L<sub>70B10</sub> > 80,000h

L<sub>80B50</sub> = 80,000h

at max. ambient temperature (see notes)

**ECG:** 220-240V AC/DC, 0 or 50-60Hz, overvoltage, overload, short circuit, excess temperature 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 DALI-interface for dimming (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
- ECG and reflector with LED-modules replaceable by qualified personnel on-site



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Suitable for pictogram	Ta max [°C]	Energy efficiency class	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



EC-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)

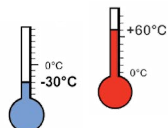
II 2 D Ex op is tb IIIC T80°C Db (Zone 21)

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

DC, 50-60Hz

Permissible ambient temperature:

-30°C up to see article table



### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

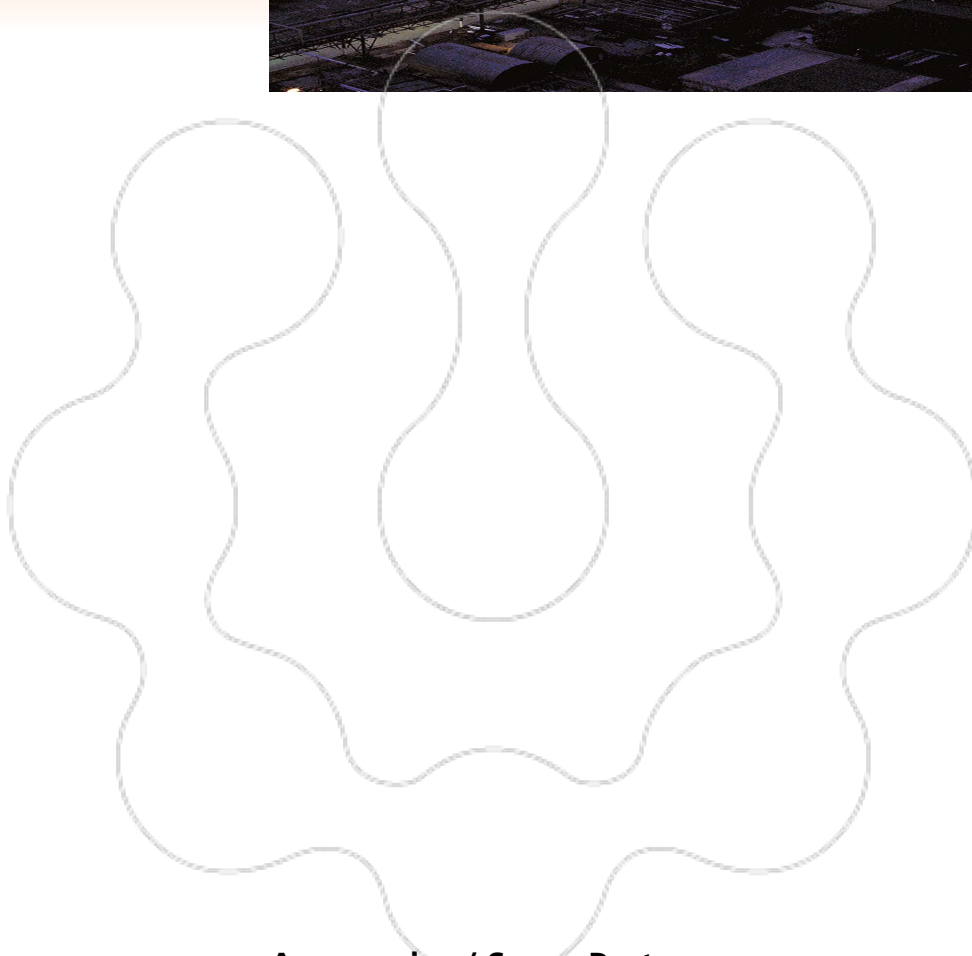
All technical data is relevant at the time of print.

Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

\* see notes

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

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



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



121/33 W

.../34 W

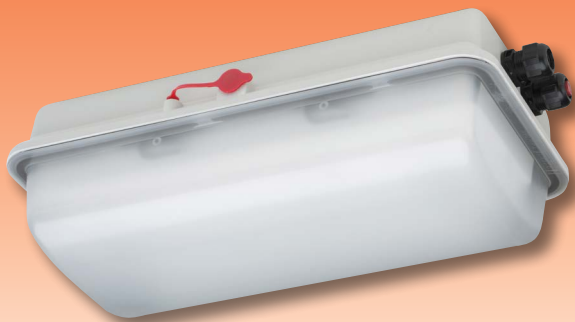
.../35 W

Viewing distance = 25m

## Accessories / Spare Parts

Article No.	Type	
<b>Spare diffuser</b>		
85501 9001	855	PC frosted
<b>Cable entries / Glands / Breathers</b>		
90117 9000	2537	ex-protected plastic cable gland M25 x 1,5
90118 9000	2538	ex-protected plastic plug M25 x 1,5
90259 9000	Klimastutzen EX	M25 x 1,5 breather
<b>Mounting material</b>		
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 brackets
26000 0002	W 26/30 P	2 wall mounting brackets 30°
26000 0003	W 26/45 P	2 wall mounting brackets 45°
<b>Self-adhesive pictograms</b>		
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:** white, detachable, carrying

the encapsulated LED-modules and protection cover.

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

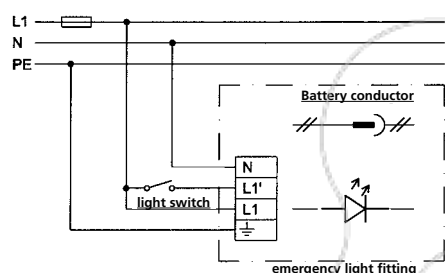
**Connection:** Prepared for looping the mains cable at one end 4 x 2.5mm<sup>2</sup>. Terminal L1 + L1' + N + PE, up to 2.5 mm<sup>2</sup>.

**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.

### 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'.

### Technical Data:

**LED:** Line modules ca. 6,500K, CRI > 80,, Lifetime  $L_{70B_{10}} > 80.000h$ ,  $L_{80B_{50}} > 80.000h$  at max. 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.

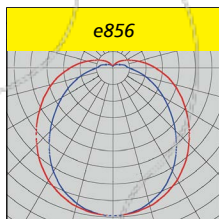
**stand-by operation** = switching on in case of mains failure.

### Options:

– Emergency lighting unit with DALI-interface for dimming and central monitoring (DIMDI)

– remote inhibiting facility

– preparation for a 6-core looping at one end

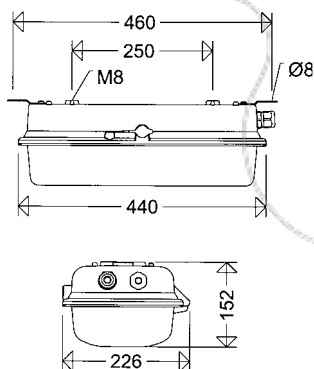


### Product highlights:

- 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
- ECG and reflector with LED-modules replaceable by qualified personnel on-site



### e856F ... (without battery box)



### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Foto: BASF

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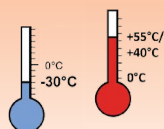
**e856...**



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

II 2 D Ex op is tb  
IIC T80°C Db

IP66



EC-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 IIC T80°C Db (Zone 21)

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 40° or 50°C (H-Versions).

Reduced emergency light duration if  
operated below 0°C.

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

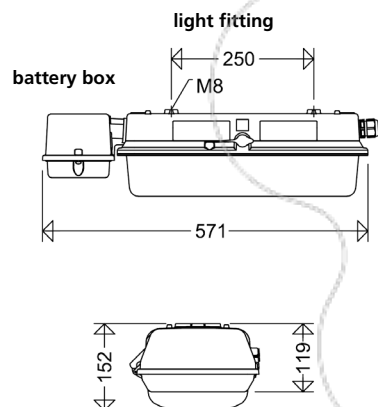
85600 0007	<b>e856F L10/1/1,6 H</b>	11	1.060	560	96	•	•	•	55	A++	2 x 8W	6,3
85600 0008	<b>e856F L10/3/2,5 H</b>	11	1.060	260	96	•	•	•	55	A++	2 x 8W	6,3
85600 0005	<b>e856F L20/1/1,6 H</b>	19	2.050	560	108	•	•	•	55	A++	2 x 18W	6,4
85600 0006	<b>e856F L20/3/2,5 H</b>	19	2.050	260	108	•	•	•	55	A++	2 x 18W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

\* see notes

\*\* 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 = 25m

## Accessories / Spare Parts

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



NEW

## 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, inner 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 4 mm<sup>2</sup>.

**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. 6,500K, CRI > 80,

Lifetime: L<sub>70B10</sub> > 100.000h

L<sub>80B50</sub> > 100.000h

L<sub>90B50</sub> > 50.000h

each at max. ambient temperature, (see notes)

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

### 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 DALI-interface for

dimming (DIMD)

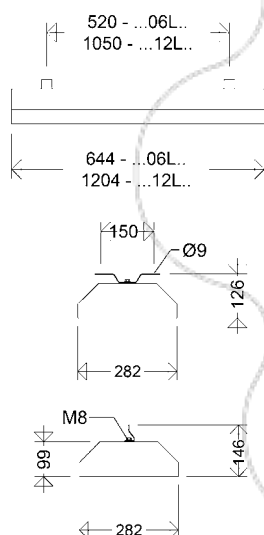
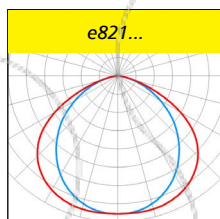
– housing made from stainless steel, painted

– prepared for 5-core cable looping system

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
- 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!)
- ECG and reflector with LED-modules replaceable by qualified personnel on-site



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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e821...



II 2 G Ex eb mb  
q IIC T4 Gb

II 2 D Ex tb  
IIIC T80°C Db

IP65



### EC-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.

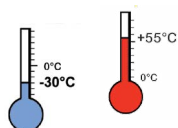
### Permissible ambient temperature:

-30°C up to +55°C

The values given are for versions with through wiring.

### 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)



### Notes:

**Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.**

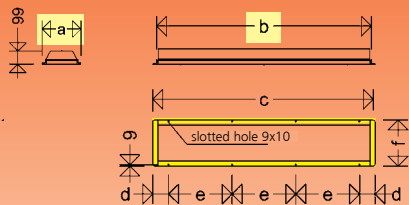
All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

\* see notes

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

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

## 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.

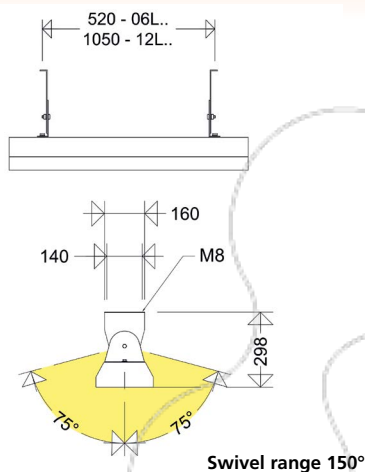
## Frame for Recessed Installation

**retrofit possible!**

Light fittings of series e821... 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, 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	for all wattages consisting of: 2 swivel arms with bolts M8



### Mounting material

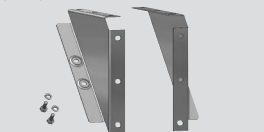
Suspension brackets H8V P



Ceiling brackets 15A P



Wall/ceiling angles WD 45 P



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

## Accessories / Spare Parts

Article No.	Type	
<b>Spare glasses</b>		
82101 9001	821 06L	spare glass for e821 06L, nD822 06L
82101 9002	821 12L	spare glass for e821 12L, nD822 12L
<b>Cable entries/cable glands</b>		
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
<b>Mounting material</b>		
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, steel



## LED Floodlight for Ex-Zone 1/21

### Series d9000...

#### Applications:

Hazardous locations of zones 1/2 (gas) and 21/22 (dust). Onshore and offshore, e.g. refining, fuel depot, loading stations, oil rigs, silos etc.

#### Design:

**Housing and glass retaining frame:**

From weather-resistant cast aluminium.

Operating unit located inside the housing.

**Safety glass pane:** Resistant to temperature variations, sealed into the frame, hingeable.

**Light control:** LED optics with narrow

(LOM) or narrow/wide (LOWW) beaming characteristics.

**Connection terminal:** Standard: L1+N+PE, clamping range: 2,5mm<sup>2</sup>.

**Mounting:** Stainless steel bracket, infinitely swivelling around the longitudinal axis of the floodlight.

#### Technical Data:

**LED:** Highpower LED, typically ca. 5.000K, colour rendering index typically CRI75, shelf life  $L_{95} B_{10} > 50.000h$  at max. ambient temperature (see notes)

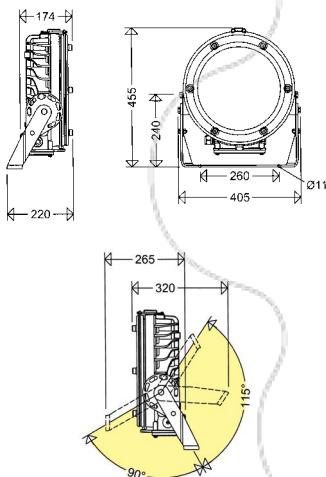
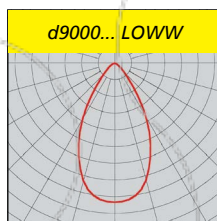
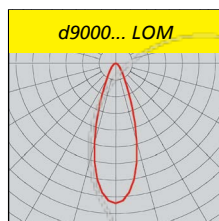
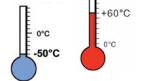
**ECG:** 220V - 240V AC, 50/60Hz. Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited. Overvoltage protection 3kV, excess temperature protection-, overload and short circuit protection.

Ambient temperature: -20°C up to +40°C

#### Options:

- clamping range up to 6mm<sup>2</sup>
- 2 cable glands for cable looping
- hard coating
- grid

- for ambient temperatures from -50°C up to +40°C/+50°C/+60°C (as per technical version)



#### Product highlights:

- housing and glass retaining frame made out of an excellent quality copper-free aluminium alloy (British Standard Marine Grade BS EN 13195) without additional painting or coating, also applicable in rough offshore installations
- instant light with maximum luminous flux even at very low temperatures (increased luminous flux)
- extremely low luminous flux decline during life cycle ( $L_{95} B_{10}$ )
- optimal thermal management possible by direct connection from the LED to the housing, large cooling surface, excellent thermal conductivity
- homogeneous and effective light distribution by specially calculated lens optics
- infinitely adjustable tilt angle

Swivel range: ± 205

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption W *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Temperature class	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [ca. kg] (without packaging material)
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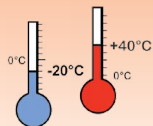
**d9000 ...**



II 2 G Ex db eb op  
is IIC T4/T6 Gb

II 2 D Ex op is  
tb IIIC T80°C Db

IP66/67



EC-Type Examination Certificate:

PTB12 ATEX 1030

Other approvals:

IECEx PTB12.0057

Marking:

II 2 G Ex db eb op is IIC T4/T6 Gb (Zone 1)

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

Ignition protection: d ( flameproof)

Ambient temperature:

-20°C up to +40°C, -50°C up to

+50/60°C depending on version

on demand

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

#### narrow beam

89000 0001	<b>d9000/4201LOM</b>	48	4.400	92	T6	40	A++	HST70/HIE150/HME250	16,8
89000 0002	<b>d9000/4203LOM</b>	90	7.700	86	T6	40	A+	HST150	16,8

#### narrow wide beam

89000 0004	<b>d9000/4201LOWW</b>	48	4.400	92	T6	40	A++	HST70/HIE150/HME250	16,8
89000 0005	<b>d9000/4203LOWW</b>	90	7.700	86	T6	40	A+	HST150	16,8

\* see notes

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

\*\*\* depending on cable gland used

Explosion protected  
Light Fittings

## Accessories / Spare Parts

Article no.	Type	
90117 9000	<b>2537</b>	Ex-protected plastic cable gland M25 x 1,5
90118 9000	<b>2538</b>	Ex-protected plastic plug M25 x 1,5

NEW

## 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.

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

**Cover:** Polycarbonate, frosted.

**Wire guard:** Galvanized steel (OSK without wire guard).

#### Connection:

3 pole terminal, max. connection range 2,5mm<sup>2</sup>.

#### Cable entry system:

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

**Mounting:** 2 cast on brackets for wall or ceiling mounting

**Standard:** Any method except.

#### Technical Data:

**LED:** approx. 6,500K, CRI typically 80

**Rated voltage:** 220-240V AC/DC

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

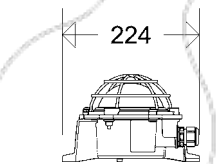
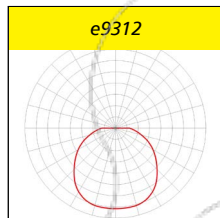
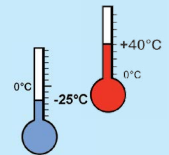
#### Options:

– 5-pole connection, max. connection range 2,5mm<sup>2</sup>

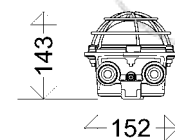
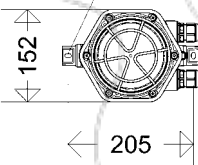
– with 2 cable glands M25 x 1,5mm<sup>2</sup>

#### 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
- 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



slotted hole 6,5x 10,5



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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**e9312**



II 2G Ex eb mb  
op is IIC T4 Gb

II 2D Ex op is tb  
IIC T80°C Db

IP66



EC-Type Examination Certificate:

in preparation

Marking:

II2G Ex eb mb op is IIC T4 Gb (Zone 1)

II2D Ex op is tb IIC T80°C Db (Zone 21)

Ignition protection: „e“ (increased safety)

93120 0001	e9312F SK	11	600	55	A++	1,3
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\* see notes

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.

Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

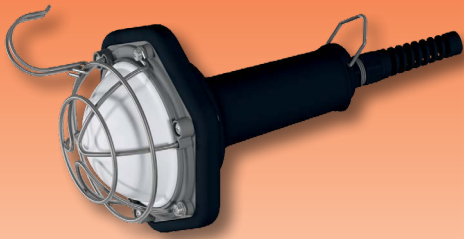
## Accessories / Spare Parts

Article no.	Type	
93101 9000	9309F	spare glass, frosted
93101 9001	930A	spare wire guard
90117 9000	2537	plastic gland M25x1,5
90118 9000	2538	plastic plug M25x1,5



**NEW**

## 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 1,5mm<sup>2</sup> 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.

**General purpose:** Any operating position.

### Technical Data:

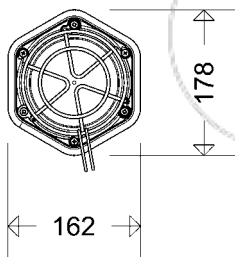
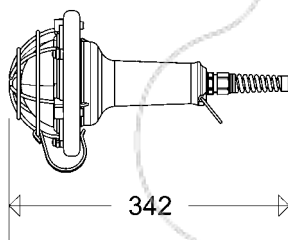
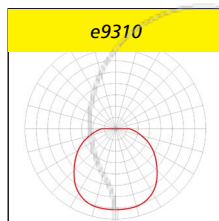
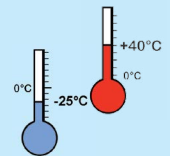
LED: approx. 6,500K, CRI typically 80

Rated voltage: 220 - 240V AC/DC

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



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	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



### EC-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	<b>e9310F</b>	11	600	55	A++	1,3
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\* see notes

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.

Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Accessories / Spare Parts

Article no.	Type	
93101 9003	<b>9308F</b>	spare glass, frosted
93101 9004	<b>9308B</b>	spare wire guard, with suspension hook
93101 9002	<b>93KT</b>	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 mm<sup>2</sup>.

**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,

Lifetime: L<sub>70B10</sub> > 100.000h

L<sub>80B50</sub> > 100.000h

L<sub>90B50</sub> > 50.000h

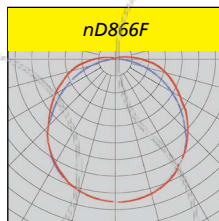
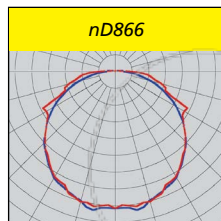
at max. ambient temperature

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

##### 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 DALI-interface for dimming (DIMD)
- with through-wiring 5 x 2,5mm<sup>2</sup>



##### Product highlights:

- Reflector and cover in sandwich design to protect the LED-Modules from mechanical or electro-static 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
- ECG and reflector with LED-modules replaceable by qualified personnel on-site



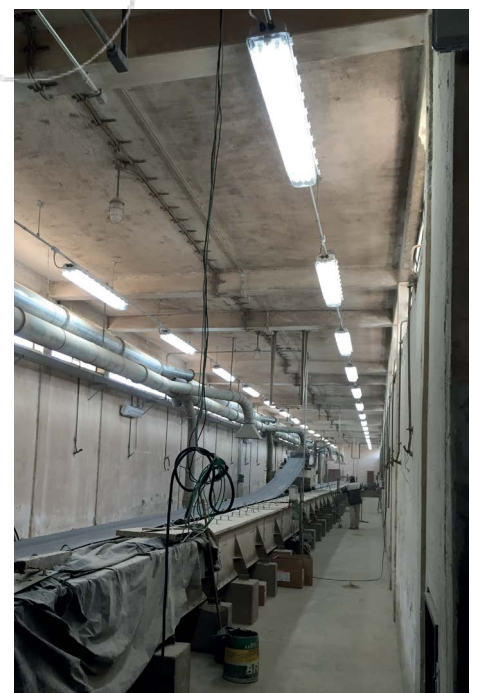
##### Looping the cable on one side:

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.

##### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W] **	Cover frosted	Cover clear	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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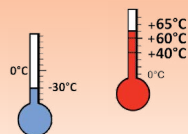
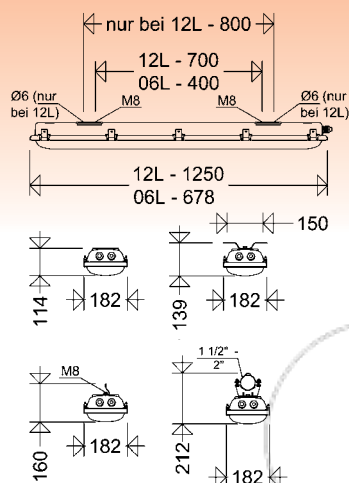
## nD866...



II 3 G Ex ec IIC  
T4 Gc

II 3 D Ex tc IIIC  
T80°C Dc

IP66



### EC-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	<b>nD866F 06L22</b>	15	2170	145	•	40	A++	2 x 18W	3,3
86600 0051	<b>nD866F 06L42</b>	28	4120	147	•	40	A++	2 x 36W	3,4
86600 0052	<b>nD866F 06L60</b>	40	5700	143	•	40	A++	2 x 58W	3,4
86600 0002	<b>nD866F 12L42</b>	28	4.360	156	•	40	A++	2 x 36W	5,4
86600 0003	<b>nD866F 12L60</b>	40	6.020	151	•	40	A++	2 x 58W	5,4
86600 0004	<b>nD866F 12L85</b>	54	8.620	160	•	40	A++	> 2 x 58W	5,5
86600 0012	<b>nD866 12L42</b>	28	4.590	164	•	40	A++	2 x 36W	5,4
86600 0013	<b>nD866 12L60</b>	40	6.320	158	•	40	A++	2 x 58W	5,4
86600 0014	<b>nD866 12L85</b>	54	9.010	167	•	40	A++	> 2 x 58W	5,5

### for high temperature <sup>1)</sup>

86600 0005	<b>nD866F 12L42 H65</b>	28	4.360	156	•	65	A++	2 x 36W	5,4
86600 0008	<b>nD866F 12L60 H60</b>	40	6.020	151	•	60	A++	2 x 58W	5,4
86600 0015	<b>nD866 12L42 H65</b>	28	4.360	156	•	65	A++	2 x 36W	5,4
86600 0017	<b>nD866 12L60 H60</b>	40	6.020	151	•	60	A++	2 x 58W	5,4

\* see notes

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

<sup>1)</sup> through-wiring or looping the cable is not permissible.

Explosion protected  
Light Fittings

## Accessories / Spare Parts

Article No.	Type	
<b>Spare covers</b>		
86601 9014	<b>8652F</b>	PC, frosted
86601 9001	<b>8654F</b>	PC, frosted
86601 9000	<b>8654</b>	PC, clear
<b>Fasteners</b>		
90055 9004	<b>KE/KES VE10</b>	stainless steel, incl. 2 safety clips (packing unit 10 pcs.)
<b>Glands/breather</b>		
90117 9006	<b>2537 G</b>	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	<b>2538 G</b>	ex-protected plastic plug M25 x 1,5 with nut
90259 9000	<b>Klimastutzen EX</b>	M25 x 1,5
<b>Mounting material</b>		
86501 9003	<b>HK 865 P</b>	2 retaining clips for variable mounting distances
90001 0002	<b>H8V P</b>	2 suspensions eyes with bolts, stainless steel
90000 0002	<b>15A P</b>	2 ceiling brackets, hot galvanized steel
90032 0002	<b>15AV P</b>	2 ceiling brackets, stainless steel
90037 0004	<b>RO84 112 A P</b>	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	<b>RO84 2 A P</b>	2 pipe clamps 2", stainless steel, with support
26000 0004	<b>W26 P</b>	2 wall mounting angles
26000 0002	<b>W26/30 P</b>	2 wall mounting angles 30°
26000 0003	<b>W26/45 P</b>	2 wall mounting angles 45°





## 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 mm<sup>2</sup>.

**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, Lifetime  $L_{70B_{10}} > 100.000h$ ,  $L_{80B_{50}} > 100.000h$  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:

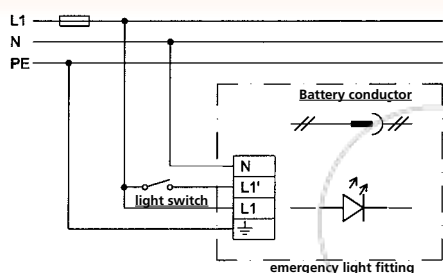
**maintained operation** = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

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

#### Options:

– Emergency lighting unit with DALI-interface for dimming and central monitoring (DIMDI)

– inhibiting facility

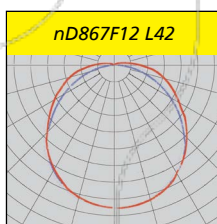
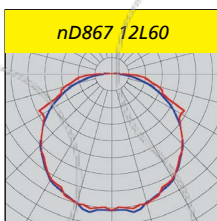


#### Starting:

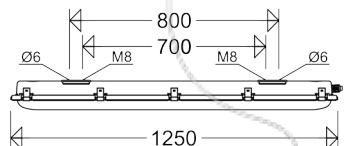
Connect battery conductor.

**Out-of-operation:** separate battery conductor.

**Stand-by operation:** Do not connect L1'.



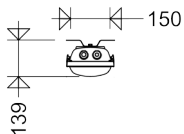
#### nD867... 12L.. (without battery box)



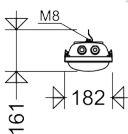
#### with HK865 P



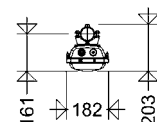
#### with 15AP



#### with H8V P



#### with RO84 ... P



#### 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
- ECG and reflector with LED-modules replaceable by qualified personnel on-site

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [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]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
-------------	------	-------------------------	----------------------	-------------------------------------	-----------------------------	---------------	-------------	-------------------	-------------------	-------------	-------------------------	-------------------	---

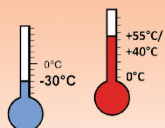
## nD867...



II 3 G Ex ec IIC  
T4 Gc

II 3 D Ex tc IIIC  
T80°C Dc

IP66



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 0003	nD867F12L42/1/4	29	4.360	750	150	•	•	•	40	A++	2 x 36W	5,6
86700 0004	nD867F12L60/1/4	41	6.020	750	147	•	•	•	40	A++	2 x 58W	5,6
86700 0013	nD867 12L42/1/4	29	4.590	800	158	•	•	•	40	A++	2 x 36W	5,6
86700 0014	nD867 12L60/1/4	41	6.320	800	155	•	•	•	40	A++	2 x 58W	5,6
86700 0101	nD867F12L42/3/4	29	4.360	750	150	•	•	•	40	A++	2 x 36W	5,6
86700 0102	nD867F12L60/3/4	41	6.020	750	147	•	•	•	40	A++	2 x 58W	5,6
86700 0111	nD867 12L42/3/4	29	4.590	800	158	•	•	•	40	A++	2 x 36W	5,6
86700 0112	nD867 12L60/3/4	41	6.320	800	155	•	•	•	40	A++	2 x 58W	5,6

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

### for high temperatures up to +55°C

#### Design:

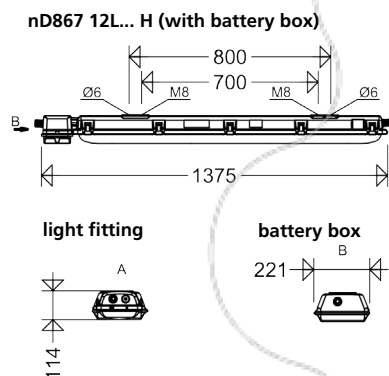
Same as standard version, but with separate battery box at one small side of the housing.

86700 0203	nD867F12L42/1/4 H	29	4.360	750	150	•	•	•	55	A++	2 x 36W	6,5
86700 0204	nD867F12L60/1/4 H	41	6.020	750	147	•	•	•	55	A++	2 x 58W	6,5
86700 0213	nD867 12L42/1/4 H	29	4.590	800	158	•	•	•	55	A++	2 x 36W	6,5
86700 0214	nD867 12L60/1/4 H	41	6.320	800	155	•	•	•	55	A++	2 x 58W	6,5

86700 0301	nD867F12L42/3/4 H	29	4.360	750	150	•	•	•	55	A++	2 x 36W	6,5
86700 0302	nD867F12L60/3/4 H	41	6.020	750	147	•	•	•	55	A++	2 x 58W	6,5
86700 0311	nD867 12L42/3/4 H	29	4.590	800	158	•	•	•	55	A++	2 x 36W	6,5
86700 0312	nD867 12L60/3/4 H	41	6.320	800	155	•	•	•	55	A++	2 x 58W	6,5

\* see notes

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



## Accessories / Spare Parts

Article No.	Type	
<b>Spare batteries</b>		
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
90222 9021	AKKU 2627 4,0Ah	Spare battery 4.0Ah (Types ...H)
90222 9023	AKKU 8020 1,6Ah	Spare battery 1.6Ah (Types ...H)
<b>Spare covers</b>		
86601 9001	8654F	PC, frosted
86601 9000	8654	PC, clear
<b>Fasteners</b>		
90055 9004	KE/KES VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.)
<b>Glands/breather</b>		
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
90259 9000	Klimastutzen EX	M25 x 1,5
<b>Mounting material</b>		
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
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0004	W26 P	2 wall mounting angles
26000 0002	W26/30 P	2 wall mounting angles 30°
26000 0003	W26/45 P	2 wall mounting angles 45°

## 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:** Diecast aluminium, natural finish, gear set located inside 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. 2,5mm<sup>2</sup>.

**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, L<sub>80</sub> > 50.000h 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)

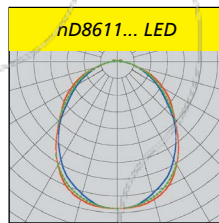
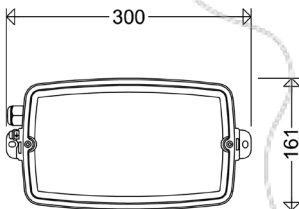
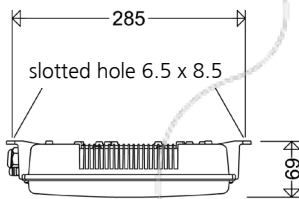


#### For series with self-contained battery:

- Emergency electronic with DALI interface for central monitoring (DI)

#### 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.

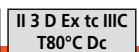
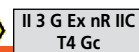


#### Product highlights:

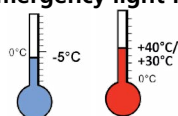
- safety in case of an emergency, instant light with maximum light output also at low temperatures
- stable luminous flux in emergency operation independent from the ambient temperatures
- outstanding visibility of the indication sign due to a superb and even illumination of the pictogram
- reduced battery capacity
- robust 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

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous flux [lm] (emergency) *	Luminous efficacy [lm/W]	1h operation time	3h operation time	Energy efficiency class	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:**

-5°C bis +30°C (maintained operation)

-0°C bis +40°C (standby operation)

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

\* see notes

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

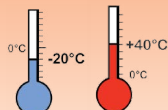
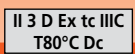
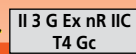
All technical data is relevant at the time of print.

Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous flux [lm] * (emergency)	Luminous efficacy [lm/W]	1h operation time	3h operation time	Energy efficiency class	Weight [kg] (without packing material)
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## nD8611 L02 W



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

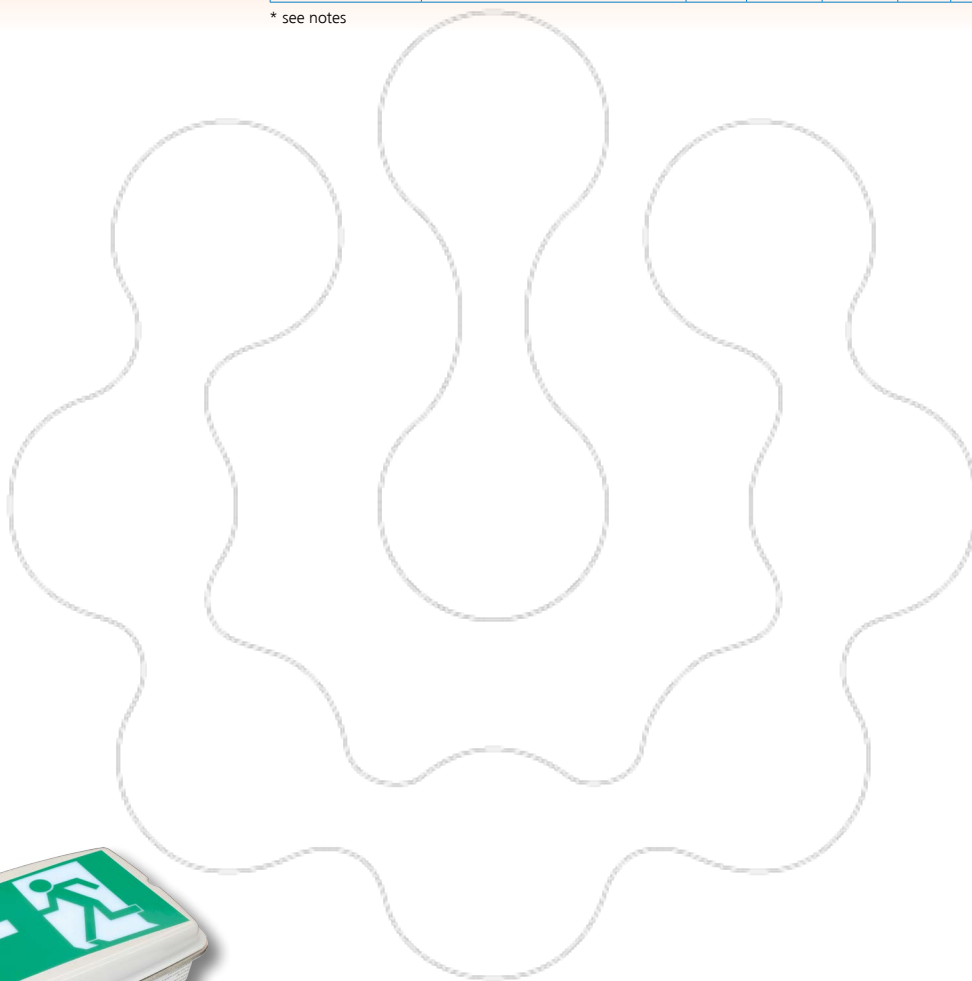
(further versions upon request).

86110 0010	nD8611 L02 W	4	150		38			A++	0,8
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for connection to central power supply unit

86111 0013	nD8611 L02 W ZB	4	150	150	38			A++	0,8
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\* see notes



Type nD8611/... with pictogram 220/110/35

### Self-adhesive pictogram



220/110/33 .../34 .../35

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

Viewing = 22m.

## Accessories / Spare Parts

Article no.	Type	
<b>Spare cover</b>		
36004 9002	3611/02	PC, white opalescent
<b>Self adhesive legends for series 3611 and 8611</b>		
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
<b>Cable entries</b>		
90120 9008	2531 G	Ex-protected cable gland with nut
90122 9001	2533 G	Ex-protected cable gland with plug and with nut
<b>Spare-batteries</b>		
90222 9026	Akku 8620	Spare-battery 1h
90222 9027	Akku 8621	Spare-battery 3h

NEW

## 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, inner hinges on the opposite side.

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

**Connection:** 3 poles up to 4 mm<sup>2</sup>.

**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,

Lifetime: L<sub>70B10</sub> > 100.000h

L<sub>80B50</sub> > 100.000h

L<sub>90B50</sub> > 50.000h

each at max. ambient temperature, (see notes)

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

### 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 DALI-interface for

dimming (DIMD)

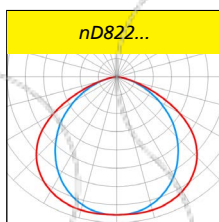
- housing made from stainless steel, painted

- prepared for 5-core cable looping system

STAINLESS STEEL  
corrosion resistant

### Note:

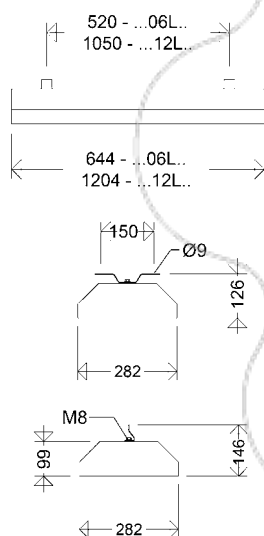
This light fitting is not suitable for application in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.



### 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!)
- ECG and reflector with LED-modules replaceable by qualified personnel on-site

Auf  
Open  
Ouvr.  
Close  
Zu  
Fermer



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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nD822...



Ignition protection: ec

Marking:

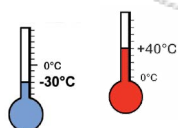
II 3 G Ex ec IIC T4 Gc (Zone 2)

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



### 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)

### Notes:

**Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.**

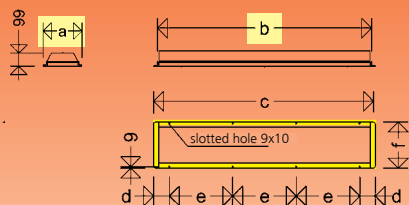
All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

\* see notes

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

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

## 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.

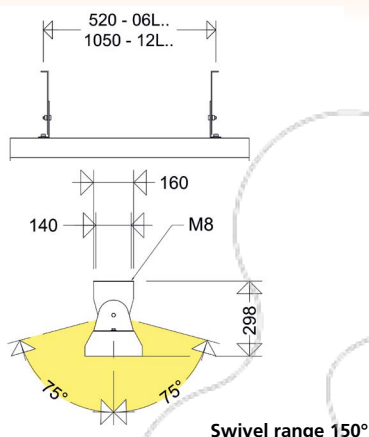
## Frame for Recessed Installation

retrofit possible!

Light fittings of series nD822... 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, 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	for all wattages consisting of: 2 swivel arms with bolts M8



### Mounting material

Suspension brackets H8V P



Ceiling brackets 15A P



Wall/ceiling angles WD 45 P



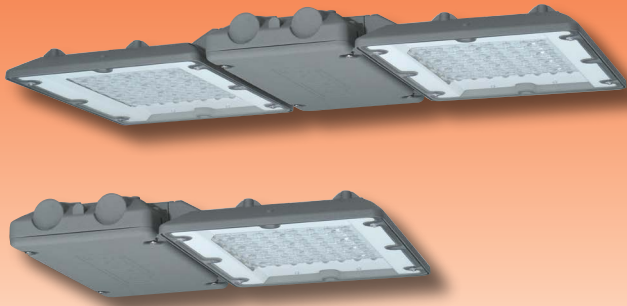
Further accessories as well as carrier rail systems and through wiring systems are available.

## Accessories / Spare Parts

Article No.	Type	
<b>Spare glasses</b>		
82101 9001	821 06L	spare glass for e821 06L, nD822 06L
82101 9002	821 12L	spare glass for e821 12L, nD822 12L
<b>Cable entries/cable glands</b>		
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
<b>Mounting material</b>		
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, steel



## 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 or 2 LED wings.  
Housing: Diecast aluminum, DB 702N (mica-iron paint). LED-housing with LED modules, optics behind tempered safety glass (IK08). ECG housing with integrated electronic control gear, prewired on terminals.

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

Connection: 5 poles up to 2,5mm<sup>2</sup>.

Entries: 1 gland M25 x 1,5.

Mounting material: See accessories/spare parts.

General Purpose: Beaming downwards (0°).

### Technical Data:

LED-module: 4,000K, CRI > 80, life time  $L_{70} > 100,000h$  or at ambient temperature  $> 50^{\circ}C$   $L_{70} > 90,000h$  (see notes).

ECG: 220 - 240V, 50-60Hz. Surge voltage resistance 4kV, overvoltage protection, excess temperature protection, overload and short circuit protection.

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited. (see technical supplement)

DALI-interface for dim light operation

Ambient temperature: -20°C up to +40°C / +50°C / +60°C (see article tables)

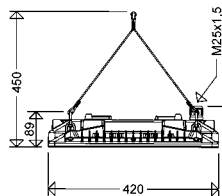
### Options:

- narrow beam version (T)
- Version with narrow oval optic (TO) for illumination of aisles in rack areas
- light output reduction (LR) per 230V control line
- uniform luminous flux option (CL) to keep the light output on same level for the whole life cycle
- version with additional threads for wall mounting by means of swivel arm brackets (swivel range 0° - 45°)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- cable looping on one side

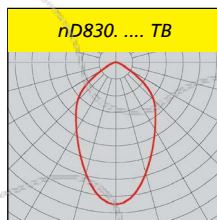
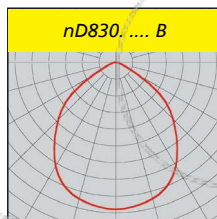
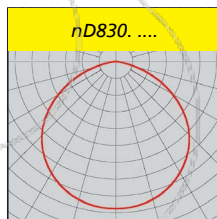
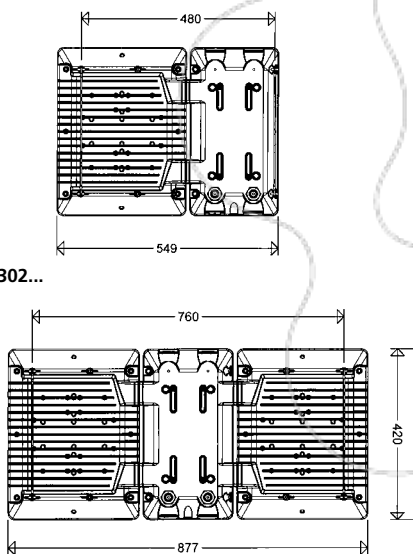
### Product highlights:

- high efficient by use of top-quality mid-power LEDs
- extremely high lifetime even at the maximum permissible ambient temperature
- **optimized thermo 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
- DALI interface (standard) for dimmed operation
- colour rendering index CRI > 80
- **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.
- future proof by using standardized LED-modules (Zhaga)

nD8301...



nD8302...



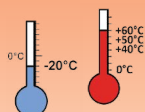
### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W] **	T max [°C]	Wide beam	Narrow-wide beam	Energy efficiency class	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)

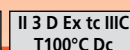
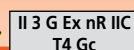
II 3 D Ex tc IIIC T100°C Dc (Zone 22)

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

Permissible ambient temperature:

-20°C up to +40°C / +50°C / +60°C

## nD8301/nD8302...



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

#### 1 LED wing

83010 0001	nD8301 L110	67	10.800	161	40	•	A++	HME 250	8,9
83010 0002	nD8301 L160	96	15.000	156	40	•	A++	HIT 250/HME 400	8,9
83010 0003	nD8301 L210	135	20.200	150	40	•	A++	HIE 400	8,9
83010 0004	nD8301 L110B	67	10.800	161	40	•	A++	HME 250	9,2
83010 0005	nD8301 L160B	96	15.000	156	40	•	A++	HIT 250/HME 400	9,2
83010 0006	nD8301 L210B	135	20.200	150	40	•	A++	HIE 400	9,2
83010 0007	nD8301 L110TB	67	10.800	161	40	•	A++	HME 250	9,2
83010 0008	nD8301 L160TB	96	15.000	156	40	•	A++	HIT 250/HME 400	9,2
83010 0009	nD8301 L210TB	135	20.200	150	40	•	A++	HIE 400	9,2

#### 2 LED wing

83020 0002	nD8302 L320	192	30.000	156	40	•	A++	HIT 400	14,5
83020 0003	nD8302 L420	270	40.400	150	40	•	A++	2 x HIE 400	14,5
83020 0005	nD8302 L320B	192	30.000	156	40	•	A++	HIT 400	14,6
83020 0006	nD8302 L420B	270	40.400	150	40	•	A++	2 x HIE 400	14,6
83020 0008	nD8302 L320TB	192	30.000	156	40	•	A++	HIT 400	14,6
83020 0009	nD8302 L420TB	270	40.400	150	40	•	A++	2 x HIE 400	14,6

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

#### 1 LED wings

83010 0101	nD8301 L110 H50	67	10.800	161	50	•	A++	HME 250	8,9
83010 0102	nD8301 L160 H50	96	15.000	156	50	•	A++	HIT 250/HME 400	8,9
83010 0104	nD8301 L110B H50	67	10.800	161	50	•	A++	HME 250	9,2
83010 0105	nD8301 L160B H50	96	15.000	156	50	•	A++	HIT 250/HME 400	9,2
83010 0107	nD8301 L110TB H50	67	10.800	161	50	•	A++	HME 250	9,2
83010 0108	nD8301 L160TB H50	96	15.000	156	50	•	A++	HIT 250/HME 400	9,2

#### 2 LED wings

83020 0101	nD8302 L220 H50	134	21.600	161	50	•	A++	HIE 400	14,5
83020 0102	nD8302 L320 H50	192	30.000	156	50	•	A++	HIT 400	14,5
83020 0104	nD8302 L220B H50	134	21.600	161	50	•	A++	HIE 400	14,6
83020 0105	nD8302 L320B H50	192	30.000	156	50	•	A++	HIT 400	14,6
83020 0107	nD8302 L220TB H50	134	21.600	161	50	•	A++	HIE 400	14,6
83020 0108	nD8302 L320TB H50	192	30.000	156	50	•	A++	HIT 400	14,6

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

#### 1 LED wings

83010 0201	nD8301 L110 H60	67	10.800	161	60	•	A++	HME 250	8,9
83010 0202	nD8301 L160 H60	96	15.000	156	60	•	A++	HIT 250/HME 400	8,9
83010 0204	nD8301 L110B H60	67	10.800	161	60	•	A++	HME 250	9,2
83010 0207	nD8301 L110TB H60	67	10.800	161	60	•	A++	HME 250	9,2

#### 2 LED wings

83020 0201	nD8302 L220 H60	134	21.600	161	60	•	A++	HIE 400	14,5
83020 0202	nD8302 L320 H60	192	30.000	156	60	•	A++	HIT 400	14,5
83020 0204	nD8302 L220B H60	134	21.600	161	60	•	A++	HIE 400	14,6
83020 0207	nD8302 L220TB H60	134	21.600	161	60	•	A++	HIE 400	14,6

\* see notes

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

## 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 D	1 pair of angle brackets for direct ceiling mounting
33001 9003	3301 W	1 angle bracket, adjustable, for wall mounting series nD8301... <sup>1)</sup>
33001 9007	3302 W	1 angle bracket, adjustable, for wall mounting series nD8302... <sup>1)</sup>

1) For mounting these brackets additional mounting holes are required on the luminaire. Please indicate way of mounting when ordering the luminaire.



## 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 and glass retaining frame are made from diecast aluminium, DB 702N (mica-iron paint). The glass frame is locked by 2 socket head cap screws (M6) and it is hinged to the body after opening. The electrical components are located inside, silicone gasket.

**Front cover:** Thermal safety glass, impact

resistance IK08.

**Optic:** lens optics with narrow-wide, narrow, or asymmetric light distribution, or without Optics wide beam, Multi-Layer technology.

**Connection terminal:** 3-pole terminal max. clamping range 2,5mm<sup>2</sup>.

**Cable entry:** 1 gland M20 x 1.5.

**Installation:** mounting bracket, swivel range 180°.

**Standard Mounting:** Facing downwards or horizontal.

### Technical Data:

**LED:** Highpower-LED 4,000K, CRI > 70, life cycle L<sub>90</sub> > 100.000h at max. ambient temperature.

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

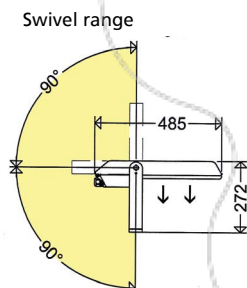
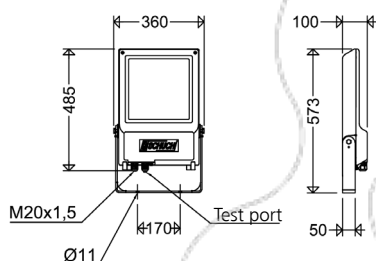
**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

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

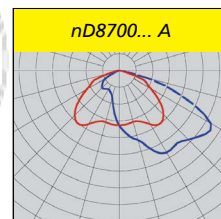
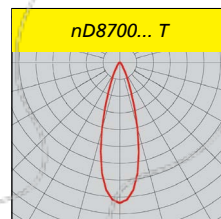
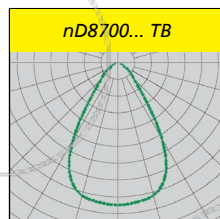
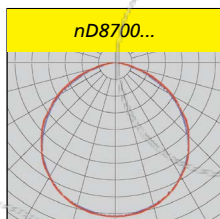
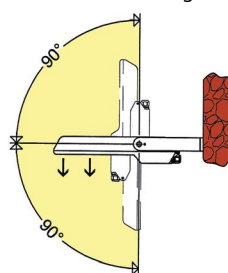
### Optionen:

- light output reduction (LR) per 230V control line (dimmable)
- Control gear with DALI-interface for dimming (DIMD)
- uniform luminous flux option (CL) to keep the light output on same level for

the whole life cycle  
– for higher ambient temperatures up to +50°C



Standard Mounting



### Product highlights:

- efficient 1:1 replacement for conventional HIT 250 W floods
- optimal thermal management possible by direct connection from the LED to the diecast aluminium housing, large cooling surface, excellent thermal conductivity
- extremely high lifetime even at maximum permissible ambient temperature
- uniform illumination due to the „Multi-Layer Principle“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
- future design due to use of ZHAGA conform LED modules

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).





Article no.	Type	Power consumption [W] *	Luminous flux ca. [lm] *	Luminous efficacy [lm/W] **	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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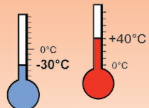
## nD8700/ ...



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

(Zone 2)

(Zone 22)

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

Permissible ambient temperature:

-30°C up to +40°C

### wide beam

87000 0007	<b>nD8700 4803</b>	106	14.700	139	40	A++	HIT/HST 150W	9,6
87000 0001	<b>nD8700 6403</b>	140	19.400	139	40	A++	HIT 250W	9,6

### narrow wide beam

87000 0008	<b>nD8700 4803TB</b>	106	14.700	139	40	A++	HIT/HST 150W	9,6
87000 0002	<b>nD8700 6403TB</b>	140	19.400	139	40	A++	HIT 250W	9,6

### narrow beam

87000 0014	<b>nD8700 4803T</b>	106	14.700	139	40	A++	HIT/HST 150W	9,6
87000 0013	<b>nD8700 6403T</b>	140	19.400	139	40	A++	HIT 250W	9,6

### asymmetrical beam (plane surface floodlight)

87000 0009	<b>nD8700 4803A</b>	106	14.700	139	40	A++	HIT/HST 150W	9,6
87000 0003	<b>nD8700 6403A</b>	140	19.400	139	40	A++	HIT 250W	9,6

\* see notes

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

## Accessories / Spare Parts

Article no.	Type	
90120 9000	<b>2531</b>	ex-protected plastic cable gland M20 x 1,5
90122 9000	<b>2533</b>	ex-protected plastic cable gland M20 x 1,5 with plug
90270 0005	<b>ROB 60/76</b>	pipe clamp for pole Ø60-76mm



## 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 and glass retaining frame are made from diecast aluminium, DB 702N (mica-iron paint). The glass frame is locked by 2 socket head cap screws (M6) and it is hinged to the body after opening. The electrical components are located inside, silicone gasket.

**Front cover:** Thermal safety glass, impact resistance IK08.

**Optic:** lens optics with narrow-wide, narrow, or asymmetric light distribution, or without Optics wide beam, Multi-Layer technology.

**Connection terminal:** 3-pole terminal, max. clamping range 2,5mm<sup>2</sup>.

**Cable entry:** 1 gland M25 x 1.5.

**Installation:** mounting bracket, swivel range 180°.

**Standard Mounting:** Facing downwards or horizontal.

### Technical Data:

**LED:** Highpower-LED 4,000K, CRI > 70, life cycle  $L_{90} > 100.000h$  at max. ambient temperature.

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

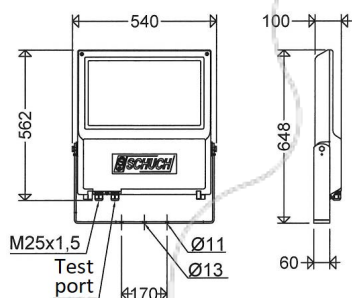
**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

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

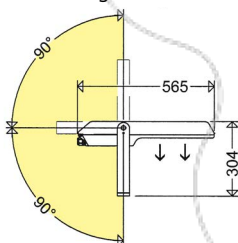
### Optionen:

- light output reduction (LR) per 230V control line (dimmable)
- Control gear with DALI-interface for dimming (DIMD)
- uniform luminous flux option (CL) to keep the light output on same level for

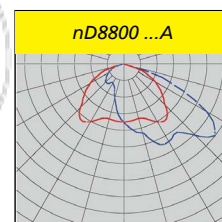
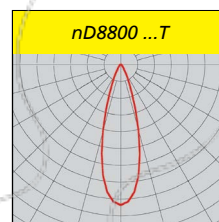
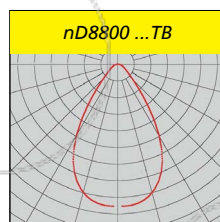
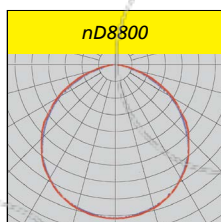
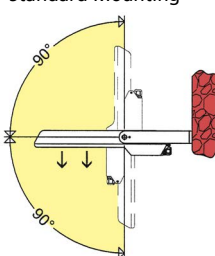
the whole life cycle  
– for higher ambient temperatures up to +50°C



Swivel range



Standard Mounting



### Product highlights:

- efficient 1:1 replacement for conventional HIT 400 W floods
- optimal thermal management possible by direct connection from the LED to the diecast aluminium housing, large cooling surface, excellent thermal conductivity
- extremely high lifetime even at maximum permissible ambient temperature
- uniform illumination due to the „Multi-Layer Principle“ i.e. every individual LED illuminates the whole surface, the light curves of the individual LED are overlapping.
- future design due to use of ZHAGA conform LED modules

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [W] *	Luminous flux ca. [lm] *	Luminous efficacy [lm/W] **	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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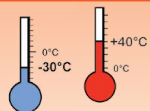
## nD8800/ ...



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

(Zone 2)

(Zone 22)

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

Permissible ambient temperature:

-30°C up to +40°C

### wide beam

88000 0001	<b>nD8800 6403</b>	140	19.900	142	40	A++	HIT 250W	15,9
88000 0007	<b>nD8800 12803</b>	280	38.300	137	40	A++	HIT 400W	17,0

### narrow wide beam

88000 0002	<b>nD8800 6403TB</b>	140	19.900	142	40	A++	HIT 250W	15,9
88000 0008	<b>nD8800 12802TB</b>	198	28.410	143	40	A++	HIE 400W	17,0

### narrow beam

88000 0013	<b>nD8800 6403T</b>	140	19.900	142	40	A++	HIT 250W	15,9
88000 0014	<b>nD8800 12802T</b>	198	28.410	143	40	A++	HIE 400W	17,0

### asymmetrical beam (plane surface floodlight)

88000 0003	<b>nD8800 6403A</b>	140	19.900	142	40	A++	HIT 250W	15,9
88000 0009	<b>nD8800 12802A</b>	198	28.410	143	40	A++	HIE 400W	17,0

\* see notes

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

Explosion protected  
Light Fittings

## Accessories / Spare Parts

Article no.	Type	
90117 9000	<b>2537</b>	ex-protected plastic cable gland M25 x 1,5
90119 9000	<b>2539</b>	ex-protected plastic cable gland M25 x 1,5 with plug
90270 0005	<b>ROB 60/76</b>	pipe clamp for pole Ø60-76mm



## 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:

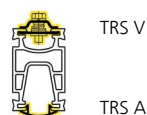
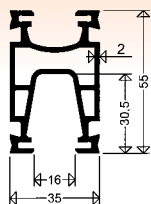
For each length of a light fitting only one suspension point is required.

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

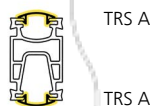
The carrier rails can either be mounted

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.

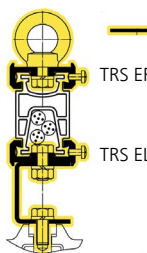
2 or 3 devices (183 L / TRS EL) serve for mounting a light fitting to the rail. The suspension devices 183 A / TRS ED and 183 H / TRS ER as well as the devices 183 L / TRS EL are movable in the longitudinal direction of the rails.



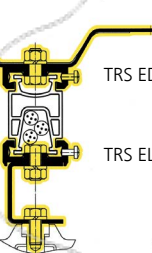
TRS V



TRS A



TRS ER



TRS ED



TRS EL



TRS EL

## TRS 2000...

aluminium carrier rails with high loading capacity for series e840..., e865...

### 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 2 M	Alu-rail 2 m long	3,03
90260 0002	TRS 2000 3 M	Alu-rail 3 m long	4,55
90260 0003	TRS 2000 5 M	Alu-rail 5 m long	7,58
90265 0005	TRS A 1	covering strip, 1 m long	0,04
90265 0006	TRS A 2	covering strip, 2 m long	0,07

## Mounting Devices

Article No.	Type	Product
90265 0004	TRS V	stainless steel device (profile) for rail connection
90265 0008	TRS 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 ER	stainless steel ring nut for chain
90265 0009	TRS EL	stainless steel mounting bracket

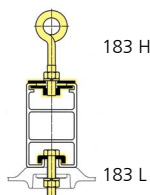
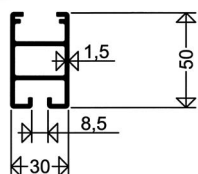
## AL...

aluminium carrier rails for series nD866...

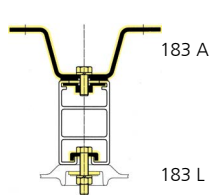
Article No.	Type	Product	Weight ca. [kg]
90005 0001	2 M AL	Alu-rail 2 m long	1,6
90005 0002	3 M AL	Alu-rail 3 m long	2,4
90005 0003	5 M AL	Alu-rail 5 m long	3,9

## 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 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:  
2.5mm<sup>2</sup> up to 16A  
4.0mm<sup>2</sup> 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 5x2,5mm<sup>2</sup> PVC of 6x2,5mm<sup>2</sup> PVC (emergency fittings Zone1/21). Fittings with such standard through wiring do have separate part numbers (see price list).

#### Example: Type e840..

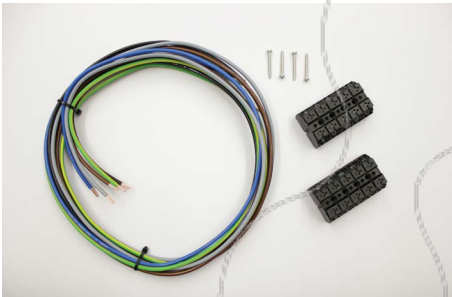
Article No.	Type	Through wiring system)
84005 0001	<b>e840 12L42</b>	without through wiring system)
84005 1001	<b>e840 12L42 DV</b>	with classical through wiring system 5 x 2.5mm <sup>2</sup> PVC

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

### Through-wiring system for retrofit

Article No.	Type	
<b>for ex-proof LED-light fittings zone 1/21</b>		
11501 0019	<b>DV/NS ZO1/21 LED e865 e840</b>	5 x 2,5mm <sup>2</sup> PVC, for e840... and e865 12 ...
<b>for ex-proof LED-light fittings zone 2/22</b>		
11891 0014	<b>DV/NS Zo2/22 LED nD866</b>	5 x 2,5mm <sup>2</sup> 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

### Design:

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

System SolConeX

### Cable entry:

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

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/... or voltages up to 415 V



II 2 G Ex db eb  
IIC T6 Gb

II 2 D Ex tb IIIC  
T80°C Db

IP66



### EC-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	<b>4216/306</b>	16A	200-250V	2P + PE	up to 2 x 6,0 mm <sup>2</sup>	1,12
41060 0008	<b>4216/506</b>	16A	200-415V	3P + N + PE	up to 2 x 6,0 mm <sup>2</sup>	1,45



## Explosion-Protected Plugs System SolConeX Series 4210...

### Applications:

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

### Design:

Housing: Made from impact resistant plastic material. System SolConeX

### Cable entry:

8 to 20 mm cable

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/... for voltages up to 415V



II 2 G Ex db eb  
IIC T6 Gb

II 2 D Ex tb IIIC  
T80°C Db

IP66



### EC-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	<b>4210/306</b>	16A	200-250V	2P + PE	up to 2 x 6,0 mm <sup>2</sup>	0,38
41050 0008	<b>4210/506</b>	16A	200-415V	3P + N + PE	up to 2 x 6,0 mm <sup>2</sup>	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 ... 2,5mm<sup>2</sup>.  
solid wire: 1,5 ... 4,0mm<sup>2</sup>

### 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 <sup>1)</sup>
DC-1	10A	220V <sup>2)</sup>

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



### EC-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	<b>8040/A</b>	ON-OFF 2 poles	8040/11-V30-33-B	0,60
80300 0004	<b>8040/W</b>	Pole changing switch	8040/11-V30-35-B	0,62

## 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 mm<sup>2</sup>.

### Cable entry:

#### **8118/4:**

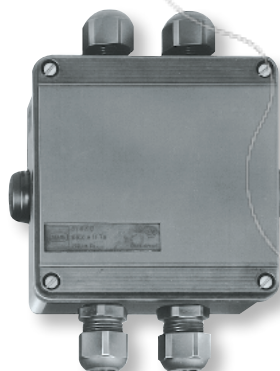
4 cable glands M25 x 1,5 +2 plugs M25 x 1,5.

#### **8118/6:**

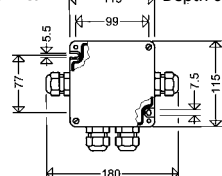
6 cable glands M25 x 1,5

### Mounting system:

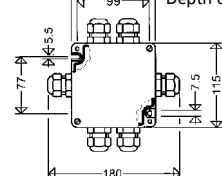
See dimensional drawings.



**8118/4** Depth 64mm



**8118/6** Depth 64mm



**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



### EC-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	<b>8118/4</b>	4 x M25 x 1,5	0,57
81180 0002	<b>8118/6</b>	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.

#### 1973

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

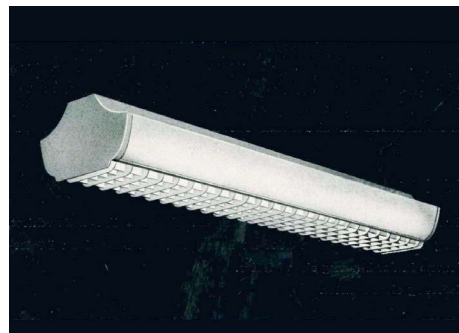
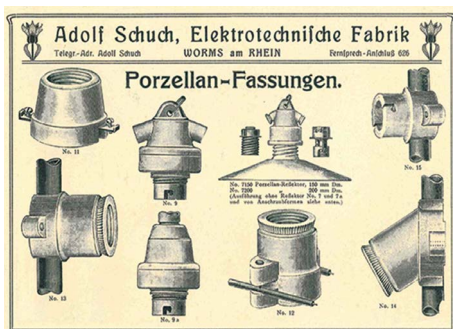
Foamed polyurethane gasket is used for the first time instead of widespread conventional rubber seals.

#### 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.



### LED-TECHNOLOGY

#### 2007

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

#### 2011

First waterproof LED light fitting series as highly efficient substitute for conventional fluorescent tube versions up to 2 x 58W.

#### 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.

#### 2016/18

The range of the LED waterproof light fittings is continuously expanded and supplemented with tubular light fittings, steep roof light fittings and anti-vandal light fittings.

#### 2019/20

SCHUH intensely investigates the influence of harmful gases on LED lights. The RESISTANT luminaire range develops from this.



Product	Series	Page
<b>Light Fittings with diffuser</b>		
<b>Series 161/162...</b>	<b>161/162...</b>	<b>52-58</b>
• with DALI interface	... DIMD	53
• dimmable via „Corridor Mode“	... DIMC	53
• with integrated motion detector	... SENS	54
• with narrow-wide optics	... T/TB	54
• for high ambient temperatures	... H50	54
• for low ambient temperatures	... T40	55
• for wide temperature ranges	... T40/H	55
• for unprotected outdoor installation	... AUS	55
• for food industry areas	... IFS	56
• for food industry areas	... LM	56/57
• FastFix/FastConnect (mounting system)	... FF/FC	57
• variable setting of the luminous flux	... VARIO	59
• for unprotected outdoor installation	... VARIO AUS	60
• for food industry areas	... VARIO LM	61
<b>Series 144...</b>	<b>144...</b>	<b>62-63</b>
<i>Extremely robust Central Locking System</i>		
• for unprotected outdoor installation	... AUS	63
<b>Series 163/164... Generation 2</b>	<b>163/164... G2</b>	<b>64-67</b>
• with DALI interface	... DIMD	65
• dimmable via „Corridor Mode“	... DIMC	65
• with integrated motion detector	... SENS	66
• for high ambient temperatures	... H50	66
• for low ambient temperatures	... T40	66
• for food industry areas	... IFS	67
<b>Series 161/162... RLED OV</b>	<b>161/162...</b>	<b>68</b>
<b>163/164... RLED OV</b>	<b>163/164...</b>	
<b>LUXANO 2</b>	<b>167... G2</b>	<b>69-70</b>
• for unprotected outdoor installation	... AUS	69
• for food industry areas	... IFS	70
• for agriculture and animal husbandry	... LW	70
<b>Oval-shaped light fittings</b>		
<b>Series 3610...</b>	<b>3610...</b>	<b>71</b>
<b>Compact LED Fittings</b>		
<b>Series 3611...</b>	<b>3611...</b>	<b>72</b>
<b>Series 164KL... Generation 2</b>	<b>164KL... G2</b>	<b>73</b>
<i>small polyester light fittings</i>		
<b>Series 130/131...</b>	<b>130/131...</b>	<b>74</b>
<i>small PC light fittings</i>		
<b>Tubular Light Fittings</b>		
<b>TUBEO</b>	<b>110...</b>	<b>75-76</b>
<i>pressure-tight and water-jet proof tube light fitting</i>		
• with high luminous flux		75
• for high ambient temperatures	... H50	76
<b>Sheet Steel Light Fittings</b>		
<b>Series 190...</b>	<b>190...</b>	<b>77</b>
<b>Series 185...</b>	<b>185...</b>	<b>78-79</b>
<b>Vandal Proof Light Fittings</b>		
<b>Series 140...</b>	<b>140...</b>	<b>80</b>
<b>Carrier Rails</b>		
	TRS 2000	81
	AL	81
	TRS 1000	82
<b>Through Wirings</b>		
	DV	82



## 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. (In case of aggressive atmosphere please consult 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, L<sub>80</sub> > 50,000h at max. ambient temperature

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

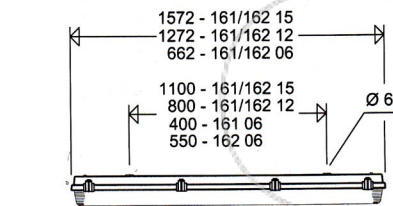
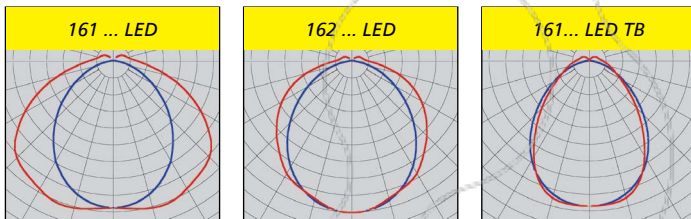
**Ambient temperature:** -20°C (-40°C for types ...T40) up to ...°C see product table

### Options:

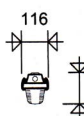
- 6 500K
- high colour rendering index R<sub>a</sub>>90 (light colour 940)
- signalization with **coloured LED**
- **amber-colored LED** e. g. for insect-friendly lighting, nature reserves, locks etc.
- increased protection against corrosive atmospheres or harmful gases, version

### ER and HR

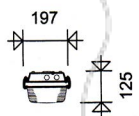
- **protection class II**
- for connection to group or central battery systems (ZB) or emergency mains respectively
- PC-diffuser, frosted (PC)
- stainless steel clips (KE)
- with through wiring system



Series 161...

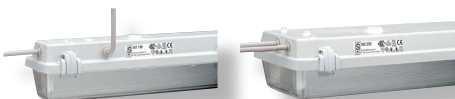


Series 162...



### 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.

### Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

### Product highlights:

- robust, extremely strong quality light fitting especially suited for rough industrial use
- high impact strength 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 "D"-sign, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- ECG and reflector with LED-modules can be replaced by qualified personnel on-site (no throw-away light fitting)
- future proof by using standardized LED-modules (Zhaga)

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
-------------	------	-----------------	--------------------------	-----------------------	-----------------------------	-------------------------------	-------------------------	----------------------	--------------------------------------

## 161/162...



### optimized for energy consumption (1 : 1 substitute for fluorescent types)

16117 0309	<b>161 06L12</b>	1	10	1.390	139	40	A++	1 x 18W	1,8
16117 0301	<b>161 12L22</b>	1	15	2.390	159	40	A++	1 x 36W	2,7
16117 0303	<b>161 15L34</b>	1	21	3.440	164	40	A++	1 x 58W	3,0
16117 0310	<b>161 06L20</b>	1	16	2.370	148	40	A++	2 x 18W	1,8
16117 0302	<b>161 12L42</b>	1	27	4.240	157	40	A++	2 x 36W	2,7
16117 0304	<b>161 15L60</b>	1	39	6.160	158	40	A++	2 x 58W	3,0

### with high luminous flux

16117 0305	<b>161 12L60</b>	1	39	5.920	152	30	A++	2 x 58W	2,7
16117 0306	<b>161 15L75</b>	1	49	7.440	152	30	A++	> 2 x 58W	3,0
16215 0302	<b>162 12L120</b>	2	78	11.410	146	35	A++	2 x 80 bzw. 3 x 58W	4,3
16215 0303	<b>162 15L150</b>	2	97	14.310	148	35	A++	4 x 58W	4,8

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

\*\* see notes

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
-------------	------	-----------------	--------------------------	-----------------------	-----------------------------	-------------------------------	-------------------------	----------------------	--------------------------------------

## 161/162... DIMD



### dimmable via DALI interface

#### Design:

Same as standard version, but with DALI-ECG and 2 additional clamping points, marked with DA, Dimming level 1 -100%.

#### Note:

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

16117 0319	<b>161 06L12 DIMD</b>	1	10	1.390	139	40	A++	1 x 18W	1,9
16117 0311	<b>161 12L22 DIMD</b>	1	15	2.390	159	40	A++	1 x 36W	2,8
16117 0313	<b>161 15L34 DIMD</b>	1	21	3.440	164	40	A++	1 x 58W	3,1
16117 0320	<b>161 06L20 DIMD</b>	1	16	2.370	148	40	A++	2 x 18W	1,9
16117 0312	<b>161 12L42 DIMD</b>	1	27	4.240	157	40	A++	2 x 36W	2,8
16117 0314	<b>161 15L60 DIMD</b>	1	39	6.160	158	40	A++	2 x 58W	3,1
16117 0315	<b>161 12L60 DIMD</b>	1	39	5.920	152	30	A++	2 x 58W	2,7
16117 0316	<b>161 15L75 DIMD</b>	1	49	7.440	152	30	A++	> 2 x 58W	3,1
16215 0312	<b>162 12L120 DIMD</b>	2	78	11.410	146	35	A++	2 x 80 bzw. 3 x 58W	4,4
16215 0313	<b>162 15L150 DIMD</b>	2	97	14.310	148	35	A++	4 x 58W	4,9

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

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!



## 161... DIMC



### dimmable 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:

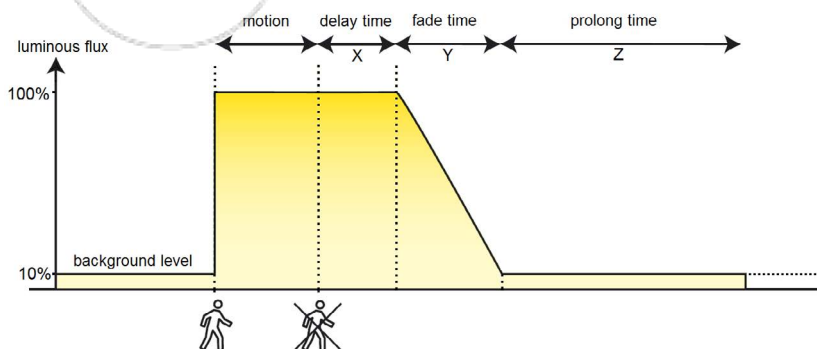
Such light fitting can be controlled by a light fitting of type 161 ... L ... SENS.

#### Technical data:

The corridor function 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	<b>161 12L22 DIMC</b>	1	15	2.390	159	40	A++	1 x 36W	2,8
16117 0422	<b>161 15L34 DIMC</b>	1	21	3.440	164	40	A++	1 x 58W	3,1
16117 0421	<b>161 12L42 DIMC</b>	1	27	4.240	157	40	A++	2 x 36W	2,8
16117 0423	<b>161 15L60 DIMC</b>	1	39	6.160	158	40	A++	2 x 58W	3,1

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

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 161... SENS



### DIMC version with integrated motion detector

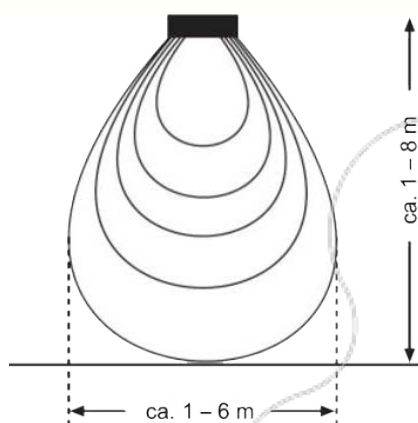
#### Applications:

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	<b>161 12L22 SENS</b>	1	15	2.390	159	40	A++	1 x 36W	2,9
16117 0699	<b>161 15L34 SENS</b>	1	21	3.440	164	40	A++	1 x 58W	3,2
16117 0698	<b>161 12L42 SENS</b>	1	27	4.240	157	40	A++	2 x 36W	2,9
16117 0700	<b>161 15L60 SENS</b>	1	39	6.160	158	40	A++	2 x 58W	3,2

## 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	<b>161 15L60TB</b>	1	39	5.980	153	40	A++	2 x 58W	3,2
16215 0601	<b>162 15L120TB</b>	2	78	11.960	153	40	A++	2 x 80 bzw. 3 x 58W	5,4

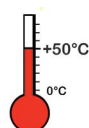


## 161... H50

### for high ambient temperatures up to +50°C

#### Applications:

Generating plant, steel plant, machine-oriented areas, areas with high process waste heat, areas close to the ceiling with accumulating heat etc.

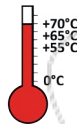
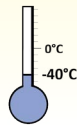


16117 0324	<b>161 06L12 H50</b>	1	10	1.390	139	50	A++	1 x 18W	2,0
16117 0334	<b>161 06L12 H50 DIMD</b>	1	10	1.390	139	50	A++	1 x 18W	2,0
16117 0321	<b>161 12L22 H50</b>	1	15	2.390	159	50	A++	1 x 36W	2,7
16117 0331	<b>161 12L22 H50 DIMD</b>	1	15	2.390	159	50	A++	1 x 36W	2,8
16117 0322	<b>161 15L34 H50</b>	1	21	3.440	164	50	A++	1 x 58W	3,0
16117 0332	<b>161 15L34 H50 DIMD</b>	1	21	3.440	164	50	A++	1 x 58W	3,1
16117 0490	<b>161 06L20 H50</b>	1	16	2.370	148	50	A++	2 x 18W	2,0
16117 0493	<b>161 06L20 H50 DIMD</b>	1	16	2.370	148	50	A++	2 x 18W	2,0
16117 0491	<b>161 12L42 H50</b>	1	27	4.240	157	50	A++	2 x 36W	2,7
16117 0494	<b>161 12L42 H50 DIMD</b>	1	27	4.240	157	50	A++	2 x 36W	2,8
16117 0492	<b>161 15L60 H50</b>	1	39	6.160	158	50	A++	2 x 58W	3,0
16117 0495	<b>161 15L60 H50 DIMD</b>	1	39	6.160	158	50	A++	2 x 58W	3,1

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

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

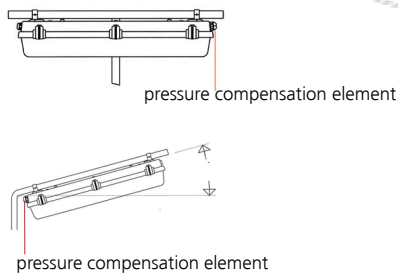




#### Notes:

The light fitting is not to be used in areas with high mechanical stress (wind) or seldom usage (i.e. maintenance and inspection only). We recommend our series 144... in AUS-version or a weather roof within very critical environmental conditions. 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



Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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### 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	A++	1 x 18W	1,8
16117 0401	161 12L22 T40	1	14	2.390	171	40	A++	1 x 36W	2,7
16117 0403	161 15L34 T40	1	21	3.440	164	40	A++	1 x 58W	3,0
16117 0410	161 06L20 T40	1	13	2.070	159	40	A++	2 x 18W	1,8
16117 0402	161 12L42 T40	1	27	4.240	157	40	A++	2 x 36W	2,7
16117 0404	161 15L60 T40	1	38	6.160	162	40	A++	2 x 58W	3,0

### 161/162... T40 / H...



for wide temperature ranges from -40° to see product table

#### 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	A++	1 x 18W	1,8
16117 0501	161 12L22 T40 H65	1	14	2.390	171	65	A++	1 x 36W	2,7
16117 0503	161 15L34 T40 H65	1	21	3.440	164	65	A++	1 x 58W	3,0
16117 0510	161 06L20 T40 H55	1	13	2.070	159	55	A++	2 x 18W	1,8
16117 0502	161 12L42 T40 H55	1	27	4.240	157	55	A++	2 x 36W	2,7
16117 0504	161 15L60 T40 H55	1	38	6.160	162	55	A++	2 x 58W	3,0
16215 0501	162 15L34 T40 H70	1	21	3.440	164	70	A++	1 x 58W	4,8
16215 0502	162 15L60 T40 H60	1	39	6.590	169	60	A++	2 x 58W	4,8

### 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.

**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.

#### Design:

As type 161/162... LED, but:

**Diffuser:** UV proof

**Pressure compensation element:** M20

optimized for energy consumption (1 : 1 substitute for fluorescent types)

16117 0350	161 06L12 AUS	1	10	1.390	139	40	A++	1 x 18W	1,8
16117 0351	161 12L22 AUS	1	15	2.390	159	40	A++	1 x 36W	2,7
16117 0353	161 15L34 AUS	1	21	3.440	164	40	A++	1 x 58W	3,0
16117 0358	161 06L20 AUS	1	16	2.370	148	40	A++	2 x 18W	1,8
16117 0352	161 12L42 AUS	1	27	4.240	157	40	A++	2 x 36W	2,7
16117 0354	161 15L60 AUS	1	39	6.160	158	40	A++	2 x 58W	3,0

with high luminous flux

16117 0355	161 12L60 AUS	1	39	5.920	152	30	A++	2 x 58W	2,7
16117 0356	161 15L75 AUS	1	49	7.440	155	30	A++	> 2 x 58W	3,0
16215 0352	162 12L120 AUS	2	78	11.410	146	35	A++	2 x 80 bzw. 3 x 58W	4,3
16215 0353	162 15L150 AUS	2	97	14.310	148	35	A++	4 x 58W	4,8

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

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

#### 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

#### 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	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 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 fo fluorescent types)

16119 0039	<b>161 06L12 IFS</b>	1	10	1.390	139	40	A++	1 x 18W	1,8
16119 0041	<b>161 12L22 IFS</b>	1	15	2.390	159	40	A++	1 x 36W	2,7
16119 0042	<b>161 15L34 IFS</b>	1	21	3.440	164	40	A++	1 x 58W	3,0
16119 0040	<b>161 06L20 IFS</b>	1	16	2.370	148	40	A++	2 x 18W	1,8
16119 0043	<b>161 12L42 IFS</b>	1	27	4.240	157	40	A++	2 x 36W	2,7
16119 0044	<b>161 15L60 IFS</b>	1	39	6.160	158	40	A++	2 x 58W	3,0

#### with high luminous flux

16119 0305	<b>161 12L60 IFS</b>	1	39	5.920	152	30	A++	2 x 58W	2,7
16119 0046	<b>161 15L75 IFS</b>	1	49	7.440	155	30	A++	> 2 x 58W	3,0
16219 0302	<b>162 12L120 IFS</b>	2	78	11.410	146	35	A++	2 x 80 bzw. 3 x 58W	4,3
16219 0004	<b>162 15L150 IFS</b>	2	97	14.310	148	35	A++	4 x 58W	4,8

#### 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.

## 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 fo fluorescent types)

16119 0005	<b>161 06L12 LM</b>	1	10	1.390	139	40	A++	1 x 18W	1,8
16119 0001	<b>161 12L22 LM</b>	1	15	2.390	159	40	A++	1 x 36W	2,7
16119 0002	<b>161 15L34 LM</b>	1	21	3.440	164	40	A++	1 x 58W	3,0
16119 0006	<b>161 06L20 LM</b>	1	16	2.370	148	40	A++	2 x 18W	1,8
16119 0003	<b>161 12L42 LM</b>	1	27	4.240	157	40	A++	2 x 36W	2,7
16119 0004	<b>161 15L60 LM</b>	1	39	6.160	158	40	A++	2 x 58W	3,2

#### with high luminous flux

16119 0018	<b>161 12L60 LM</b>	1	39	5.920	152	30	A++	2 x 58W	2,7
16119 0019	<b>161 15L75 LM</b>	1	49	7.440	152	30	A++	> 2 x 58W	3,0
16219 0002	<b>162 15L100 LM</b>	2	67	10.510	157	40	A++	2 x 80W	4,8
16219 0006	<b>162 12L120 LM</b>	2	78	11.410	146	35	A++	2 x 80 bzw. 3 x 58W	4,3
16219 0007	<b>162 15L150 LM</b>	2	97	14.310	148	35	A++	4 x 58W	4,8

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

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!



#### Note:

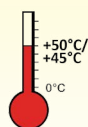
The colour rendering index Ra does not incorporate the remaining part (R9) in the light spectrum. The standard light colour 840 has only a minor R9 value. For meat processing factories, we recommend the use of our light fittings with light colour 940 (special version), which emits a bigger amount of red light.

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 161... LM H..



for high ambient temperatures up to +50°C

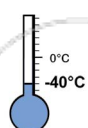


16119 0067	161 06L12 LM H50	1	10	1.390	139	50	A++	1 x 18W	2,0
16119 0051	161 12L22 LM H50	1	15	2.390	159	50	A++	1 x 36W	2,8
16119 0052	161 15L34 LM H50	1	21	3.440	164	50	A++	1 x 58W	3,0
16119 0050	161 06L20 LM H50	1	16	2.370	148	50	A++	2 x 18W	2,0
16119 0053	161 12L42 LM H50	1	27	4.240	157	50	A++	2 x 36W	4,3
16119 0054	161 15L60 LM H50	1	39	6.160	158	50	A++	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	A++	1 x 36W	2,7
16119 0102	161 15L34 LM T40	1	21	3.440	164	40	A++	1 x 58W	3,2
16119 0103	161 12L42 LM T40	1	27	4.240	157	40	A++	2 x 36W	2,7
16119 0104	161 15L60 LM T40	1	38	6.160	162	35	A++	2 x 58W	3,2

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.  
\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

**NEW**

## 161... FastFix/FastConnect (FF/FC)



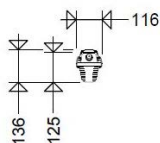
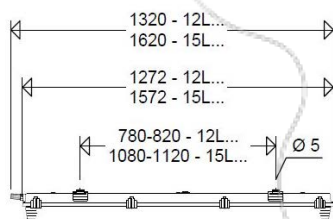
with FastFix mounting system

**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	A++	1 x 36W	2,7
16117 0803	161 15L34 FF/FC	1	21	3.440	164	40	A++	1 x 58W	3,0
16117 0802	161 12L42 FF/FC	1	27	4.240	157	40	A++	2 x 36W	2,7
16117 0804	161 15L60 FF/FC	1	39	6.160	158	40	A++	2 x 58W	3,0



**Dustproof/Waterproof  
Light Fittings**





## Accessories / Spare Parts

Article no.	Type		Article no	Type	
spare glasses, PMMA frosted			spare glasses, PC frosted		
16111 9035	161 018 F	for 161 06..	16111 9036	161 018 FPC	for 161 06..
16111 9031	161 036 F	for 161 12..	16111 9033	161 036 FPC	for 161 12..
16111 9032	161 058 F	for 161 15..	16111 9034	161 058 FPC	for 161 15..
16211 9035	162 018 F	for 162 06..	16211 9030	162 018 FPC	for 162 06..
16211 9031	162 036 F	for 162 12..	16211 9033	162 036 FPC	for 162 12..
16211 9032	162 058 F	for 162 15..	16211 9034	162 058 FPC	for 162 15..
spare glasses LM-version 161...			spare glasses LM-version 162...		
16111 9017	161 018 LM	for 161 06..			
16111 9018	161 036 LM	for 161 12..	16211 9018	162 036 LM	for 162 12..
16111 9019	161 058 LM	for 161 15..	16211 9019	162 058 LM	for 162 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					
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			
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			

# Dustproof/Waterproof LED Light Fitting with Diffuser with variable setting of the luminous flux Series 161... VARIO

## Applications:

Areas, where one standardised LED-light fitting shall be used for different illumination tasks. In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, roofed outdoor areas, hard to reach areas with high downtime and maintenance costs when replacing the lamps etc. (Aggressive atmospheres: Please consult 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.

**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:** Line modules 4,000K, CRI > 80, L<sub>80</sub> > 50,000h at max. ambient temperature. (see notes)

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

**DIP switch for setting the luminous flux of the luminaire.**

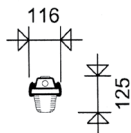
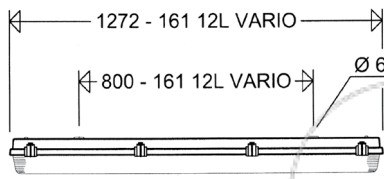
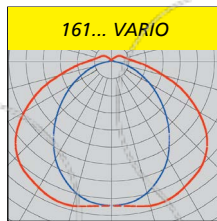
**Ambient temperature:** -20°C up to +35/40/45°C (see type table)

## Options:

– 6.500K

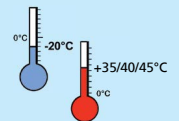
– with through wiring system

– 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 strength 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 „D“-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)
- economical storage due to standardisation (only one light fitting instead of multiple versions)
- ECG and Reflector with LED-modules replaceable by qualified personnel on-site (no throw-away light fitting)
- future proof by using LED-modules according to Zhaga standard



## 161... VARIO



The luminous flux is variably adjustable to almost every value between 2.410lm and 5.920lm. Power consumption and

admissible ambient temperature will change depending on the setting of the luminous flux.

Article No.	Type	Power consumption [W] **	Luminous flux [lm] 1)**	Luminous efficacy [lm/W]**	Amb. temp. max. [°C]	Energy efficiency class	Substitute for ca. *	(without packing material)
16117 0399	161 12L VARIO	15	2.410	160	45	A++	1 x 36W	2,7
		22	3.610 <sup>2)</sup>	164	45	A++	1 x 58W	
		29	4.510	156	40	A++	2 x 36W	
		39	5.920	152	35	A++	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.  
\*\* see notes

## Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://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). We recommend our series 144... in AUS-version or a weather roof within very critical environmental conditions. When mounting the light fittings on bracket poles or tubular beams/pipes always use original SCHUCH pipe clamps with support (see accessories).

## 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

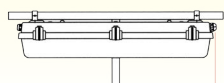
Pressure compensation element: M20

Entries: 1 gland M20 at one small side, pressure compensation element M20 at the other small side.

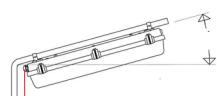
### Mounting:

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

Article No.	Type	Power consumption [W] **	Luminous flux [lm] 1)**	Luminous efficacy [lm/W]**	Amb. temp. max. [°C]	Energy efficiency class	Substitute for ca. *	(without packing material)
16117 0359	161 12L VARIO AUS	15	2.410	160	45	A++	1 x 36W	2,7
		22	3.610 <sup>2)</sup>	164	45	A++	1 x 58W	
		29	4.510	156	40	A++	2 x 36W	
		39	5.920	152	35	A++	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.  
\*\* see notes

### 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





## 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 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. The luminous flux is variably adjustable to almost every value between 2.410lm and 5.920lm. Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

Article No.	Type	Power consumption [W] **	Luminous flux [lm] 1) **	Luminous efficacy [lm/W] **	Amb. temp. max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] (without packing material)
16119 0399	161 12L VARIO LM	15	2.410	160	45	A++	1 x 36W	2,7
		22	3.610 <sup>2)</sup>	164	45	A++	1 x 58W	
		29	4.510	156	40	A++	2 x 36W	
		39	5.920	152	35	A++	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.

\*\* see notes

### 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	
<b>Spare diffuser</b>		
16111 9031	161 036 F	PMMA, frosted
16111 9033	161 036 FPC	PC, frosted
16111 9018	161 036 LM	LM, clear

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. (Aggressive atmospheres: Please consult 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 2,5mm<sup>2</sup> 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, L<sub>80</sub> > 50,000h at max. ambient temperature

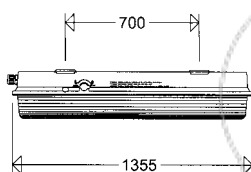
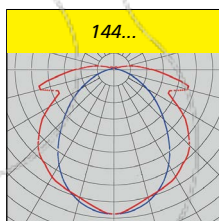
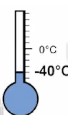
**ECG:** 220-240V, 50/60HZ, overload and short-circuit protection

**Ambient temperature:** -20°C up to see product table

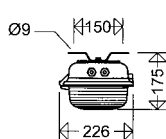
### Options:

- 6.500K
- ECG with DALI interface for dimming (DIMD)
- dimmable via „Corridor Mode“ (DIMC)
- with through wiring 2,5 sqmm
- for low ambient temperatures

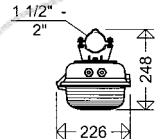
- for connection to group or central battery systems (ZB) or emergency mains respectively
- emergency light version with self-contained battery



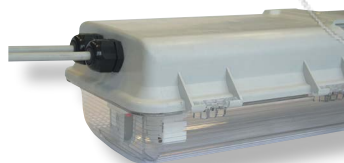
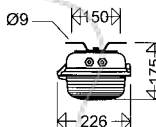
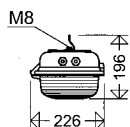
Pipe clamp mounting



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 strength
  - 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 “D”-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
- ECG and reflector with LED-modules can be replaced by qualified personnel on-site
- **future proof by using standardized LED-modules (Zhaga)**



### Notes:

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

See “Technical Supplement”

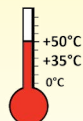
All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Amb. temp. max. [°C]	Energy efficiency class	Substitute for *	Weight [kg] without packing material
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## 144 ..



14402 0001	<b>144 12L22</b>	14	2.300	164	50	A++	1 x 36W	6,6
14402 0002	<b>144 12L34</b>	22	3.410	155	45	A++	1 x 58W	6,6
14402 0003	<b>144 12L42</b>	29	4.280	148	40	A++	2 x 36W	6,6
14402 0004	<b>144 12L60</b>	44	6.590	150	35	A++	2 x 58W	6,6



### Note:

This light fitting is not suitable for rare or occasional operation (e.g. maintenance and inspection lighting).

## 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	<b>144 12L22 AUS</b>	14	2.300	164	50	A++	1 x 36W	6,6
14402 0012	<b>144 12L34 AUS</b>	22	3.410	155	45	A++	1 x 58W	6,6
14402 0013	<b>144 12L42 AUS</b>	29	4.280	148	40	A++	2 x 36W	6,6
14402 0014	<b>144 12L60 AUS</b>	44	6.590	150	35	A++	2 x 58W	6,6

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

\*\* see notes

### 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	
<b>Spare diffusers for series 144...</b>		
84001 9004	<b>8404 SIL</b>	spare cover PC for 144 12L..
<b>Cable glands</b>		
25600 9000	<b>2560</b>	ex-proof plastic cable gland M25 x 1,5
90118 9000	<b>2538</b>	ex-proof plastic plug M25 x 1,5
90259 9003	<b>DAE20/25</b>	adapter gland M20 -> M25 with pressure compensation
<b>Mounting material</b>		
90001 0002	<b>H8V P</b>	2 suspension eyes with bolts, stainless steel
90000 0002	<b>15A P</b>	2 ceiling brackets, hot galvanized steel
90032 0002	<b>15AV P</b>	2 ceiling brackets, stainless steel
90037 0004	<b>RO84 112 A P</b>	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	<b>RO84 2 A P</b>	2 pipe clamps 2", stainless steel, with support
26000 0008	<b>W 26/L P</b>	2 wall mounting angles, sendzimiz
26000 0002	<b>W 26/30 P</b>	2 wall mounting angles 30°, sendzimiz
26000 0003	<b>W 26/45 P</b>	2 wall mounting angles 45°, sendzimiz



## Dustproof/Waterproof LED Light Fitting with Diffuser Series 163/164 ... Generation 2



### 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. Aggressive atmospheres: Please consult 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:

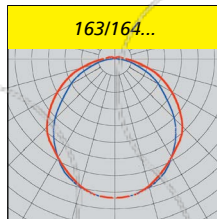
ECG: 220-240V, 50/60Hz, overload and short circuit protection

LED: line modules 4,000K, CRI > 80, life time  $L_{80} > 50,000$ h at max. ambient temperature (see notes)

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

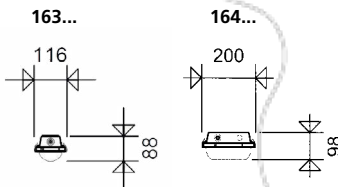
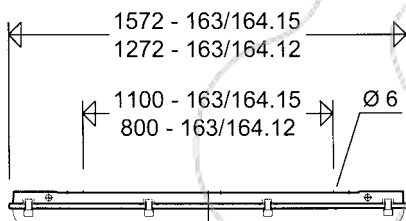
### Options:

- polycarbonate diffuser stippled clear
- 6.500 K
- stainless steel clips (KE)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- with through wiring system



### 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 "D"-symbol, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- no throw-away light fitting, ECG and reflector with LED-modules may be replaced by qualified personnel on site
- future proof by using LED-modules according to Zhaga standard



Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max.[°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 163/164... G2



### optimized for energy consumption (1 : 1 substitute for fluorescent types)

16302 0016	163 12L22G2	1	17	2.470	145	40	A++	1 x 36W	2,2
16302 0017	163 15L34G2	1	22	3.370	153	40	A++	1 x 58W	2,4
16302 0018	163 12L42G2	1	28	4.160	149	40	A++	2 x 36W	2,2
16302 0019	163 15L60G2	1	40	6.090	152	40	A++	2 x 58W	2,4

### with high luminous flux

16415 0016	164 12L90G2	2	58	8.990	155	40	A++	2 x 80W	3,1
16415 0017	164 15L120G2	2	80	12.030	150	40	A++	4 x 58W	3,8

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

\*\* see notes

### Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	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 DALI-ECG and 2 additional clamping points, marked with DA, Dimming level 1 -100%.

#### 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	A++	1 x 36W	2,3
16302 0021	163 15L34G2 DIMD	1	21	3.330	159	40	A++	1 x 58W	2,8
16302 0022	163 12L42G2 DIMD	1	27	4.110	152	40	A++	2 x 36W	2,3
16302 0023	163 15L60G2 DIMD	1	39	5.970	153	40	A++	2 x 58W	2,8
16415 0018	164 12L90G2 DIMD	2	58	8.990	155	40	A++	2 x 80W	3,5
16415 0019	164 15L120G2 DIMD	2	80	12.030	150	40	A++	4 x 58W	4,1

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

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

## 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.

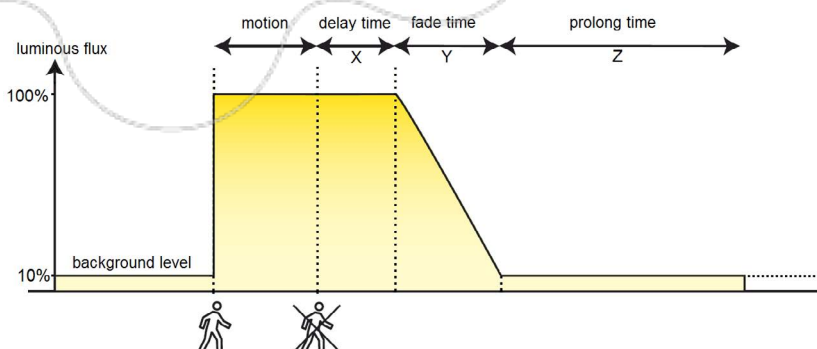


#### Technical data:

The corridor function 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	A++	1 x 36W	2,2
16302 0025	163 15L34G2 DIMC	1	21	3.330	159	40	A++	1 x 58W	2,8
16302 0026	163 12L42G2 DIMC	1	27	4.110	152	40	A++	2 x 36W	2,2
16302 0027	163 15L60G2 DIMC	1	39	5.970	153	40	A++	2 x 58W	2,8
16415 0020	164 12L90G2 DIMC	2	58	8.990	155	40	A++	2 x 80W	3,5
16415 0021	164 15L120G2 DIMC	2	80	12.030	150	40	A++	4 x 58W	4,4

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

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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## 163... G2 SENS



### DIMC version with integrated motion detector

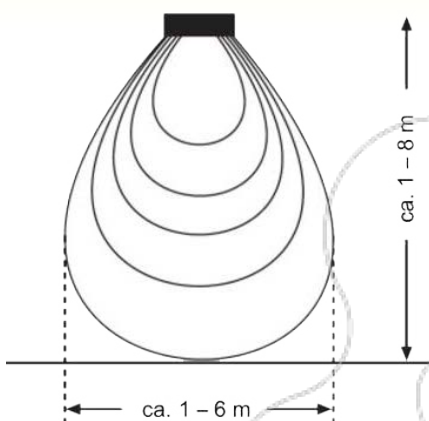
#### Applications:

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	<b>163 12L22G2 SENS</b>	1	15	2.320	155	40	A++	1 x 36W	2,3
16302 0031	<b>163 12L42G2 SENS</b>	1	21	3.330	159	40	A++	2 x 36W	2,3
16302 0028	<b>163 15L34G2 SENS</b>	1	27	4.110	152	40	A++	1 x 58W	2,5
16302 0029	<b>163 15L60G2 SENS</b>	1	39	5.970	153	40	A++	2 x 58W	2,5

\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.  
 \*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

**NEW**

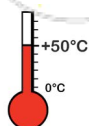
## 163... G2 H50



### 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	<b>163 12L22G2 H50</b>	1	17	2.470	145	50	A++	1 x 36W	2,2
16302 0041	<b>163 15L34G2 H50</b>	1	22	3.370	153	50	A++	1 x 58W	2,4
16302 0042	<b>163 12L42G2 H50</b>	1	28	4.160	149	50	A++	2 x 36W	2,2
16302 0043	<b>163 15L60G2 H50</b>	1	40	6.090	152	50	A++	2 x 58W	2,4

**NEW**

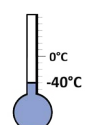
## 163... G2 T40



### for ambient temperatures down to -40°C

#### Applications:

Cooling chambers, frozen food stock etc.



16302 0080	<b>163 12L22G2 T40</b>	1	15	2.320	155	40	A++	1 x 36W	2,2
16302 0081	<b>163 15L34G2 T40</b>	1	21	3.330	159	40	A++	1 x 58W	2,4
16302 0082	<b>163 12L42G2 T40</b>	1	27	4.110	152	40	A++	2 x 36W	2,2
16302 0083	<b>163 15L60G2 T40</b>	1	39	5.970	153	40	A++	2 x 58W	2,4

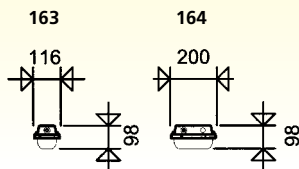
\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.  
 \*\* see notes, power consumption in dimming mode depends on the dimming adjustment!



Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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#### 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	<b>163 12L22 IFS</b>	1	17	2.620	154	40	A++	1 x 36W	2,2
16319 0002	<b>163 15L34 IFS</b>	1	22	3.570	162	40	A++	1 x 58W	2,4
16319 0003	<b>163 12L42 IFS</b>	1	28	4.410	158	40	A++	2 x 36W	2,2
16319 0004	<b>163 15L60 IFS</b>	1	40	6.460	162	40	A++	2 x 58W	2,4

### with high luminous flux

16419 0001	<b>164 12L90 IFS</b>	2	58	9.530	164	40	A++	2 x 80W	3,5
16419 0002	<b>164 15L120 IFS</b>	2	80	12.750	159	40	A++	4 x 58W	4,4

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

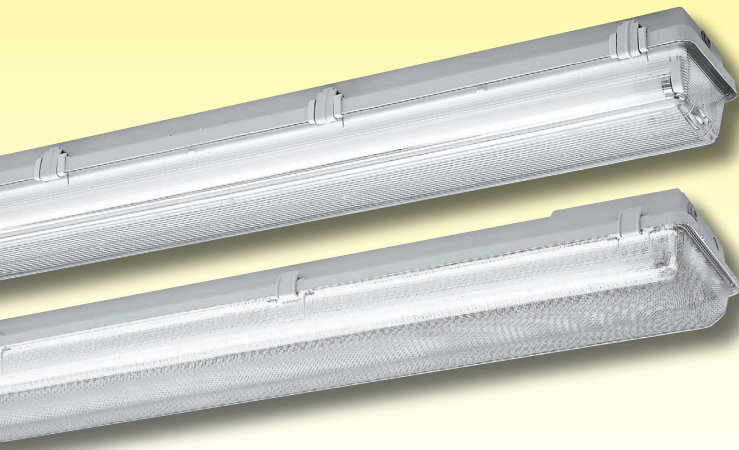
\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

#### 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		Article no.	Type	
<b>Spare glasses, PMMA, frosted</b>			<b>Spare glasses, PC, stippled clear</b>		
16711 9001	<b>167 036</b>	for 163 12 L.. G2	16311 9004	<b>163 036 PC</b>	for 163 12L.. IFS
16711 9002	<b>167 058</b>	for 163 15 L.. G2	16311 9005	<b>163 058 PC</b>	for 163 15L.. IFS
16411 9008	<b>164 036 F G2</b>	for 164 12 L.. G2	16411 9004	<b>164 036 PC</b>	for 164 12L.. IFS
16411 9009	<b>164 058 F G2</b>	for 164 15L.. G2	16411 9005	<b>164 058 PC</b>	for 164 15L.. IFS
16311 9006	<b>163 036 F</b>	for 163 12L...			
16311 9007	<b>163 058 F</b>	for 163 15L...			
16411 9006	<b>164 036 F</b>	for 164 12L...			
16411 9007	<b>164 058 F</b>	for 164 15L...			
<b>Fasteners</b>					
90123 9007	<b>163 KK/KKS V08</b>	plastic, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9006	<b>163 KE/KES V08</b>	stainless steel, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9004	<b>163 KKS P</b>	1 pair of safety clips (for LED version), plastic			
90123 9005	<b>163 KES P</b>	1 pair of safety clips (for LED version), stainless steel			
<b>Cable entries</b>					
90063 9000	<b>2511</b>	blanking plug M20			
25610 9000	<b>2561</b>	plastic cable gland M20 x 1,5			
25600 9000	<b>2560</b>	plastic cable gland M25 x 1,5			
<b>Protective guard, powder coated</b>					
90004 0002	<b>SK 140</b>	for 163 12...			
90004 0003	<b>SK 165</b>	for 163 15...			
90004 0005	<b>SK 240</b>	for 164 12...			
90004 0006	<b>SK 265</b>	for 164 15...			
<b>Pipe clamps</b>					
90245 0003	<b>163 RO 112A P</b>	1 1/2", stainless steel, with support (pair) for 163...			
90245 0004	<b>163 RO 2A P</b>	2", stainless steel, with support (pair) for 163...			
90245 0005	<b>164 RO 112A P</b>	1 1/2", stainless steel, with support (pair) for 164...			
90245 0006	<b>164 RO 2A P</b>	2", stainless steel, with support (pair) for 164...			
<b>Attention: Observe the fixing distance when mounting on boom with pipe clamps (boom length!)</b>					
<b>Accessories for ceiling mounting</b>					
90049 0002	<b>183 S</b>	swing hook for chain suspension			
90095 0001	<b>183 DS</b>	stainless steel bracket, with screw M5			
<b>Infrared remote control for SENS-light fittings</b>					
90295 9000	<b>FB SENSOTEC-Mini</b>	Infrared remote control for 163 ... SENS			



## Dustproof/Waterproof Light Fitting with Diffuser for LED Retrofit-Lamps with short-circuit starter 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 selective switch-off in case of Lamp fail.

**Cable entries:** 2 plugs M20.

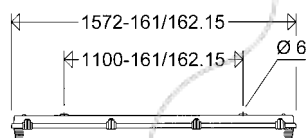
**Mounting:** Closed knock-outs for direct ceiling mounting (to be opened at site). Sealing and pressure disks inside each fitting.

### Options:

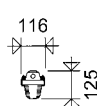
- polycarbonate diffuser stippled clear
- Diffuser polycarbonate (PC)
- Diffuser frosted
- silicone gasket

### Note:

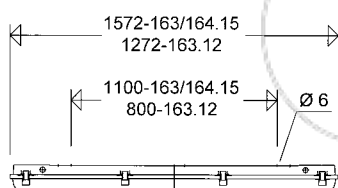
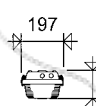
Not suitable for retrofit lamps that are designed for use in ECG luminaires. Operate IEC 62776 certified lamps only that are released by the manufacturer to operate at mains voltage.



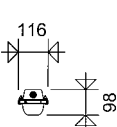
161...



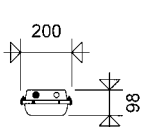
162...



163...



164...



Article no.	Type	Lamps	Length [m]	Weight [kg] without packaging material
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### 161/162... RLED OV



16117 0107	161 1/15 RLED OV	1 x LED-Retrofit	1,5	3,0
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.

NEW

# LUXANO 2

## Dustproof/Waterproof LED Light Fitting with Diffuser Series 167 ... G2

### Applications:

In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, hard to reach areas, areas with high downtime and maintenance cost when replacing the lamps. Aggressive atmospheres: Please consult us.

### Design:

**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 top, 2 blanking plugs M20.

**Mounting system:** 2 retaining clips made of stainless steel, 2 bracket for chain suspension (part of the delivery)

### Technical data:

**ECG:** 220-240V, 50/60Hz

**LED:** Linear modules 4,000K, CRI > 80, life time L<sub>80</sub> > 50,000h at max. ambient temperature (see notes)

**Ambient temperature:** -20°C up to +35°C

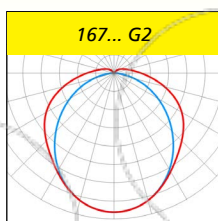
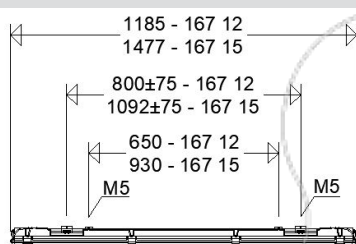
### Options:

- through wiring
- quick-connector „Fast Connect“ (FC)
- for connection to group or central bat-

tery systems (ZB) or emergency mains respectively

### 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)!



### Product highlights:

- quality product with high-quality components from well-known manufacturers
- homogeneous illumination by using frosted diffusers, no individual light spots visible, comfortable perception of light and excellent glare limitation
- "D"-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 back
- FastFix quick-action mounting system, with retaining clips made of stainless steel for variable mounting distances, without opening the fitting.
- no throw-away light fitting - resource-saving and environmentally friendly



### 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). We recommend our series 144... in AUS-version or a weather roof within very critical environmental conditions. When mounting the light fittings on bracket poles or tubular beams/pipes always use original SCHUCH pipe clamps with support (see accessories).

### Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Energy efficiency class	Substitute for *	Weight [kg] without packing material
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### 167... G2

16700 0012	167 15L34G2	28	3.850	138	A++	1 x 58W	2,0
16700 0013	167 12L42G2	30	4.100	137	A++	2 x 36W	1,7
16700 0014	167 15L60G2	43	6.000	140	A++	2 x 58W	2,0

### 167... G2 AUS

#### 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 gasket

**Pressure compensation element:** M20

**Entries:** 1 gland M20 at one small side, pressure compensation element M20 at the other small side.

16701 0012	167 15L34G2 AUS	28	3.850	138	A++	1 x 58W	2,0
16701 0013	167 12L42G2 AUS	30	4.100	137	A++	2 x 36W	1,7
16701 0014	167 15L60G2 AUS	43	6.000	140	A++	2 x 58W	2,0

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

\*\* see notes



Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Energy efficiency class	Substitute for *	Weight [kg] without packing material
-------------	------	--------------------------	-----------------------	----------------------------	-------------------------	------------------	--------------------------------------

#### 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.

## 167... G2 IFS



### for application in food industry areas

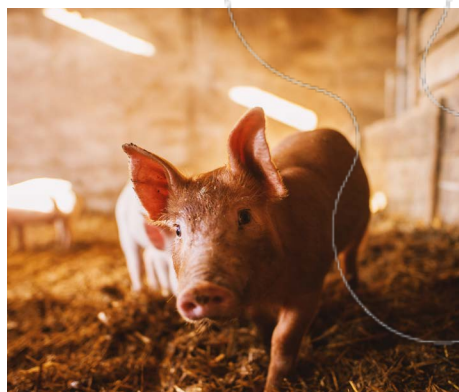
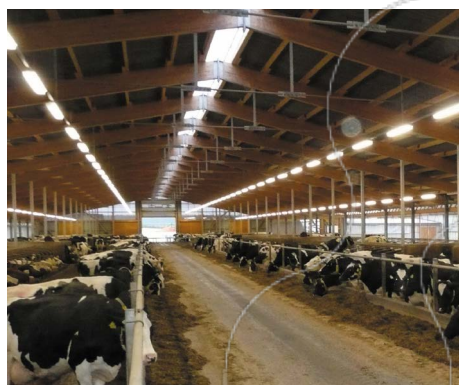
#### Applications:

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 167... G2 but:  
Diffuser: cover Polycarbonate, frosted.

16719 0012	<b>167 15L34G2 IFS</b>	28	3.610	129	A++	1 x 58W	2,0
16719 0013	<b>167 12L42G2 IFS</b>	30	3.850	129	A++	2 x 36W	1,7
16719 0014	<b>167 15L60G2 IFS</b>	43	5.640	131	A++	2 x 58W	2,0



## 167... G2 LW



### for application in stables and agriculture farming

#### Applications:

Stables, humid, wet and dusty indoor areas in agricultural farms, rooms with increased fire risk due to deposits of combustible dusts; e. g. barns, straw, animal feed etc.

Same as type 167... G2 but with corrosion-proof and highly ammonia-resistant components.

#### Design:

#### Product highlights:

- permanently ammonia-resistant design
- corrosion-proof encapsulated electronic ballast
- highly resistant LED Modules
- Closures made of stainless steel
- "D"-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 (in process)

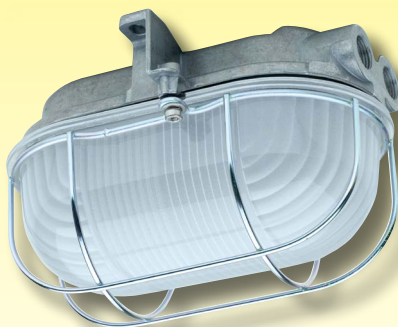
16702 0013	<b>167 12L42G2 LW</b>	23	4.000	174	A++	1 x 58W	1,7
16702 0014	<b>167 15L60G2 LW</b>	37	6.140	166	A++	2 x 58W	2,0

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

\*\* see notes

## Accessories / Spare Parts

Article no.	Type	
<b>spare glasses, PMMA, frosted</b>		
16711 9003	<b>167 036G2</b>	PMMA for 167 12L.. G2
16711 9004	<b>167 058G2</b>	PMMA for 167 15L.. G2
16711 9005	<b>167 036G2 PC</b>	PC for 167 12L.. G2 IFS
16711 9006	<b>167 058G2 PC</b>	PC for 167 15L.. G2 IFS
<b>Fasteners</b>		
90123 9008	<b>167G2 KE V10</b>	stainless steel (packing unit 10)
<b>Cable entries</b>		
90063 9000	<b>2511</b>	blanking plug M20
25610 9000	<b>2561</b>	plastic cable gland M20 x 1,5
90259 9002	<b>DAE20</b>	Pressure compensation element M20 for ... AUS
<b>Accessories</b>		
90049 0004	<b>167 VBC P</b>	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.

### Design:

Housing: Cast aluminium, unpainted.

Wire guard: Steel, passivated.

Glass bowl: Silicate, frosted with internal prism structure, silicone gasket.

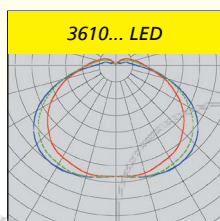
Reflector: Aluminium painted, with LED-Linear modules.

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: Line modules 4,000K, CRI > 80, life cycle  $L_{80}$  > 50,000h at max. ambient temperature (see notes).

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

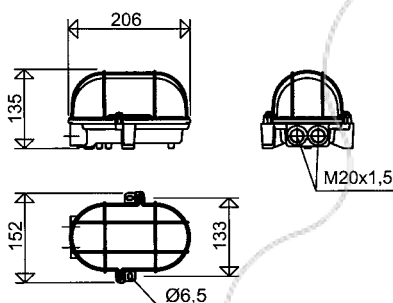
Ambient temperature: -20°C up to +35°C

### Options:

– coloured LED for signalling application

### Product highlights:

- robust fitting for rough environment
- ideal for small spacing
- homogeneous illumination by using frosted diffusers, comfortable perception of light
- with "D"-sign, suitable for rooms with increased fire risk
- quick mounting with outer fixing points
- ECG and LED-module may be replaced by qualified personnel on-site



Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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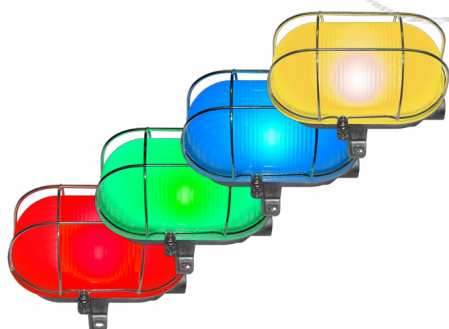
### 3610...



36102 0031	<b>3610 L04</b>	5,0	550	110	A++	1 x 40W	1,2
36102 0032	<b>3610 L10</b>	9,5	960	101	A++	1 x 75W	1,2

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

\*\* see notes



3610... with coloured LED for signalling application

### Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Accessories / Spare Parts

Article No.	Type	
90075 9002	<b>1595 SATINIERT</b>	spare glass (frosted)
36101 9000	<b>3610 K</b>	spare wire guard
59600 9001	<b>596 SIL</b>	spare gasket
<b>Cable glands M20 x 1,5</b>		
25610 9000	<b>2561</b>	plastic gland M20 x 1.5
25730 9000	<b>2573</b>	plastic threaded blanking plug M20 x 1.5



## 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, excavators, giant equipment, runways, cable channels, stair towers, walkable low temperature booths, wind power stations, purpose of signalization with coloured LED etc.

### 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.

### Technical data:

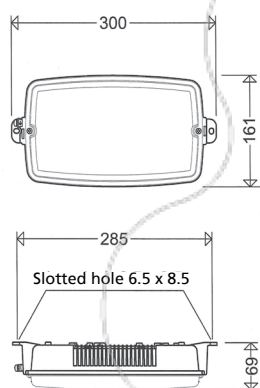
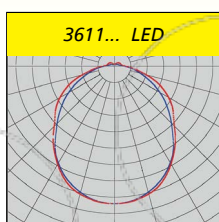
**LED:** Line modules 4,000K, CRI > 80, L<sub>80</sub> > 50.000h at max. ambient temperature (see notes)

**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
- PC glass (white opalescent)
- cable looping system on one side
- for outdoor installation
- for higher ambient temperatures
- for connection to group or central battery systems (ZB) or emergency mains respectively



### Product highlights:

- robust 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 "D"-sign, suitable for rooms with increased fire risk
- quick mounting with outer fixing points
- ECG and LED-module may be replaced by qualified personnel on-site

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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### 3611...



36110 0006	<b>3611 L05</b>	6,0	660	110	A++	1 x 8W	0,9
36110 0007	<b>3611 L10</b>	10,0	1.180	118	A++	1 x 18W	0,9

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

\*\* see notes



## Accessories / Spare Parts

Article No.	Type	
36004 9003	<b>3611/03</b>	spare diffuser, PC, frosted
36004 9002	<b>3611/02</b>	spare diffuser, PC, white-opalescent

### Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).





## Compact Dustproof/Waterproof LED-Light Fitting Series 164KL... Generation 2

### Applications:

Humid, wet and dusty, small interior areas, walkable low temperature cabins, restaurants, supermarkets, hotels etc., above doors, entrances and exits, roofed outdoor areas etc. (aggressive agents – please consult us).

### Design:

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

**Diffuser:** PMMA frosted for glare limit-

ation.

**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:

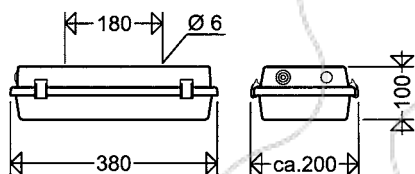
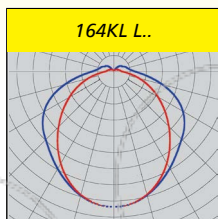
**LED:** Line modules, 4.000K, CRI > 80, life cycle of the LED L<sub>80</sub> > 50.000h.

**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) temperatures
- for connection to group or central battery systems (ZB) or emergency mains respectively– for higher/lower ambient temperatures
- stainless steel clips (KE)
- cable entries up to M25 x 1.5
- cable looping at 1 small side
- 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 "D"-symbol, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- no throw-away light fitting, ECG and reflector with LED-module may be replaced by qualified personnel on-site
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] without packing material
<b>164KL...</b>							
16407 0031	<b>164KL L05G2</b>	4,5	490	109	A++	1 x 8W	1,0
16407 0032	<b>164KL L08G2</b>	8,5	840	99	A++	1 x 11W	1,0
16407 0033	<b>164KL L11G2</b>	10,0	1.150	115	A++	1 x 18W	1,0
16407 0034	<b>164KL L15G2</b>	14,0	1.490	106	A++	1 x 24W	1,0

\* see notes

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

Dustproof/Waterproof  
Light Fittings

## Accessories / Spare Parts

Article no.	Type	
<b>Spare glasses PMMA frosted</b>		
16413 9007	<b>164 000 F G2</b>	for 164KL L... G2
<b>Cable entries</b>		
90063 9000	<b>2511</b>	blanking plug M20
25610 9000	<b>2561</b>	plastic cable gland M20 x 1,5
25600 9000	<b>2560</b>	plastic cable gland M25 x 1,5
<b>Mounting brackets</b>		
90232 0012	<b>WA 45 ALU</b>	wall bracket 45°
90232 0013	<b>WA 90 ALU</b>	wall bracket 90°
90232 0004	<b>DA</b>	1 pair of ceiling/wall bracket 90°
<b>Fasteners</b>		
90123 9003	<b>163 KK VE08</b>	plastic (packing unit 8)
90123 9002	<b>163 KE VE08</b>	stainless steel (packing unit 8)

### Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



## 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, for purpose of signalization with coloured LED, areas which are difficult to access etc.

### 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, life cycle of the LED L<sub>80</sub> > 50.000h at max. ambient temperature (see notes)

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

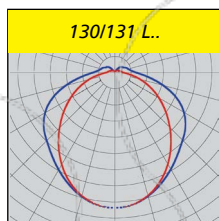
**Ambient temperature:** -20°C up to +30°C

### Options:

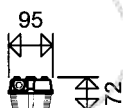
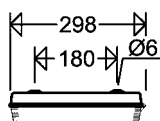
- for connection to 24V DC supply (types 130/131 L07)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- cable entry in the back of the housing

(series 130...)

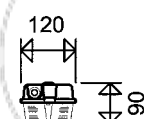
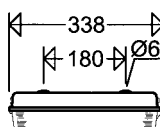
- cable looping at 1 small side (131... RR)
- for higher/lower ambient temperatures
- purpose of signalization with coloured LED



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 "D"-symbol, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- ECG and reflector with LED-module may be replaced by qualified personnel on site
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W] *	Energy efficiency class	substitute for ca. **	Weight [kg] without packing material
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## 130/131 ..



13003 0051	130 L07	8,0	750	94	A++	1 x 11W	0,4
13101 0001	131 L04	4,0	460	115	A++	1 x 8W	0,5
13101 0002	131 L07	8,0	780	98	A++	1 x 11W	0,5
13101 0003	131 L10	10,0	1.050	105	A++	1 x 18W	0,5
13101 0004	131 L13	13,0	1.370	105	A++	2 x 11W	0,5

\* see notes

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

### 130... with coloured LED for signalling application

#### Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Accessories / Spare Parts

Article no.	Type	
13011 9007	130 000 F	Spare covers - PC, frosted (polycarbonate) for series 130... L
13111 9006	131 000 F	Spare covers - PC, frosted (polycarbonate) for series 131... L
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 130/131/2	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

## 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, food industry, slaughter houses, subway and railway stations endangered by vandalism, prisons, car parks, etc..

### 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 (DIMD version 5-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:** Line modules 4,000K, CRI > 80, L<sub>70</sub>B<sub>10</sub> > 50,000h at max. ambient temperature (see notes)

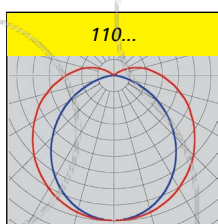
**ECG:** 220-240V, 50/60Hz, overload and short-circuit protection

**Ambient temperature:** -25°C up to see article tables

### Options:

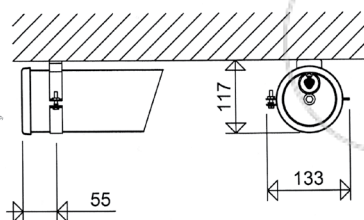
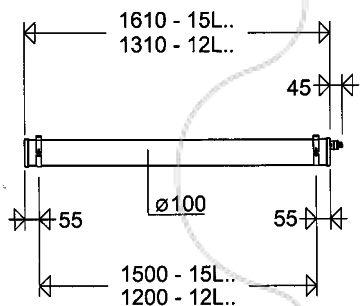
- 6.500K
- PC-tube (4 x IK10/80 Joule) for food industry areas according to „International Featured Standard Food“
- for low ambient temperatures
- increased protection against corrosive atmospheres or harmful gases, version ER

- 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 mm<sup>2</sup> or up to 5 x 2,5 mm<sup>2</sup>



### Product highlights:

- sturdy and extremely rugged tubular light fitting for application in rough environments
- dust- and pressure water tight (IP68 3m/30min)
- 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 "D"-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
- future proof by using standardized LED-modules (Zhaga)



For vertical installation, please note:

Plug part must face downwards. Through wiring not possible. For Cable looping please use accessory 110 SVDA 3.

### Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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### 110...

11000 0003	110 12L22	15	2.390	159	45	A++	1 x 36W	4,4
11000 0013	110 12L22 DIMD	15	2.390	159	45	A++	1 x 36W	4,4
11000 0004	110 15L34	21	3.440	164	45	A++	1 x 58W	5,0
11000 0014	110 15L34 DIMD	21	3.440	164	45	A++	1 x 58W	5,0
11000 0005	110 12L42	27	4.240	157	35	A++	2 x 36W	4,4
11000 0015	110 12L42 DIMD	27	4.240	157	35	A++	2 x 36W	4,4
11000 0006	110 15L60	39	6.160	158	35	A++	2 x 58W	5,0
11000 0016	110 15L60 DIMD	39	6.160	158	35	A++	2 x 58W	5,0

### with high luminous flux

11000 0007	110 15L100	67	10.360	155	35	A++	3 x 58W	5,1
11000 0017	110 15L100 DIMD	67	10.360	155	35	A++	3 x 58W	5,1

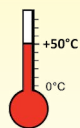
\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

\*\* see notes, power consumption in dimming mode depends on the dimming adjustment!

Dustproof/Waterproof Light Fittings



Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Ambient temperature max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
<b>110... H50</b>								



### for high ambient temperatures up to +50°C

11000 0055	<b>110 12L42 H50</b>	27	4.240	157	50	A++	2 x 36W	4,4
11000 0056	<b>110 15L60 H50</b>	38	6.160	162	50	A++	2 x 58W	5,1

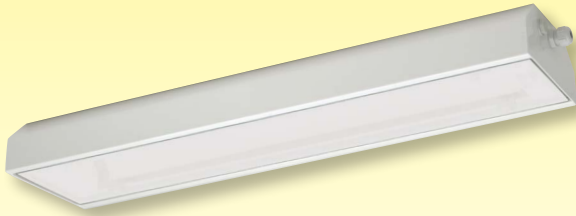
\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.  
 \*\* see notes, power consumption in dimming mode depends on the dimming adjustment!



## Accessories / Spare Parts

Article No.	Type	
90272 9001	<b>110 RO V P</b>	1 pair of pipe clamps, stainless steel
90273 9001	<b>110 036</b>	spare tube PMMA for 110 12L..
90273 9002	<b>110 058</b>	spare tube PMMA for 110 15L..
90273 9003	<b>110 036 PC</b>	spare tube PC for 110 12L..
90273 9004	<b>110 058 PC</b>	spare tube PC for 110 15L..
90049 0002	<b>183 S</b>	hook for chain suspension, stainless steel
90278 9001	<b>110 SVDA-3</b>	splitter connector for in-out wiring on one end
90278 9002	<b>110 SVDA-5</b>	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).

### 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 mm<sup>2</sup> 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.

### Technical data:

**LED:** Line-modules 4,000K; CRI>80, life expectancy L<sub>80</sub> > 50,000 hours (at max. ambient temperature)

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

**Ambient temperature:** -20°C up to see table of article

### Options:

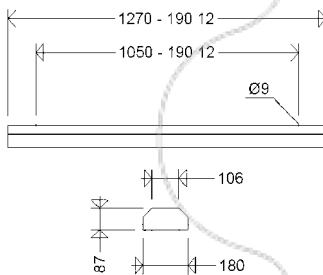
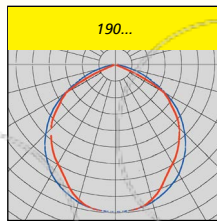
- ECG with DALI interface for dimming (DIMD)
- in stainless steel, powder coated
- for connection to group or central battery systems (ZB) or emergency mains respectively

### 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 basins or water treatment plants.

### Note:

In case of permanently humid atmosphere please ask for stainless steel housings.



### 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 „D“-sign, therefore suitable for application in rooms/locations with increased fire risk due to flammable dusts and fibers.
- future-proof due to use of standardized LED-modules (Zhaga)



Article no.	Type	Quantity of ECG	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Ambient temp. max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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### 190...

19002 0014	190 12L40	1	32	4.330	135	60	A++	1 x 36 / 1 x 58	8,5
19002 0015	190 12L60	1	46	6.200	135	55	A++	2 x 36 / 2 x 58	8,7

\* see notes

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

## Accessories / Spare Parts

Article No.	Type	
<b>Spare glass clear</b>		
19001 9002	190 28/54	for 190 12...
<b>Cable entries</b>		
25610 9000	2561	plastic cable gland M20 x 1,5
25730 9000	2573	threaded blanking plug M20x1,5
<b>Mounting accessories</b>		
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

### Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

NEW

## LED-Steep roof light fitting Series 185...

### Applications:

Industrial, tradesmen's and commercial facilities with extreme conditions, aggressive environments (e.g. oil, grease) or high mechanical exposure, spray booths and spraying rooms (not EX), sand blasting rooms (SSK-versions) etc.

### Design:

**Housing:** Sheet steel, light grey, powder coated (RAL 7035).

**Safety glass:** Frameless, clear, internal hinge, tilttable.

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

**Central locking:** Internal, to be opened from outside with 5mm allen key, inner hinges on the opposite side.

**Cable entries:** 3 x M25 (2 cable gland and 2 blanking plugs), looping the cable at one side possible.

### Mechanical installation:

Mounting accessories see spare parts/accessories.

### Technical data:

**LED:** Line-modules 4,000K; CRI>80, life expectancy  $L_{80} > 50,000$  hours (at max. ambient temperature)

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

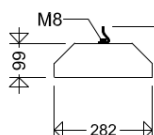
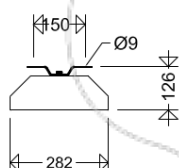
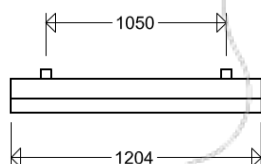
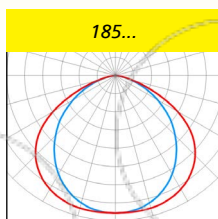
**Ambient temperature:** -20°C up to see table of articles

### Options:

- ECG with DALI interface for dimming (DIMD) respectively
- for connection to central or group battery system (ZB) or emergency mains
- for use in sand blasting locations or cabins (SSK)
- in stainless steel, powder coated

### 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.



### Product highlights:

- extremely flat and robust design
- smooth housing with all latches inside the housing
- comfortable central locking system with internal hinges
- perfect protection of the LED from mechanical or electrostatic damages through glare limitation elements on top the led
- homogeneous, glarefree illumination with frosted glare limitation elements, no individual light points visible, comfortable perception of light
- high colour rendering CRI > 80, according to the work place guidelines suitable for nearly all branches
- with „D“-sign, therefore suitable for application in rooms/locations with increased fire risk due to flammable dusts
- retrofittable Frame for Recessed Installation and Swivel Arm Mounting System (modular construction)
- inexpensive able looping possible
- ECG and reflector with LED-modules replaceable by qualified personnel on-site
- future-proof due to use of standardized LED-modules (Zhaga)



Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Ambient temp. max. [°C]	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
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### 185...



18501 0001	185 12L60	43	6.190	144	55	A++	2 x 58W	14,0
18501 0002	185 12L90	64	9.310	145	55	A++	3 x 58W	14,0
18501 0003	185 12L120	86	12.270	143	45	A++	4 x 58W	14,0

\* see notes

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

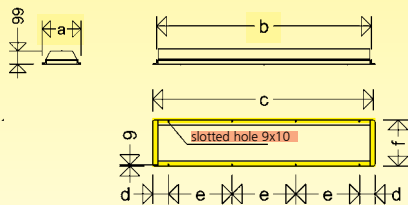
### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



## Installation dimensions



Type	a	b	c	d	e	f
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.

## 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).

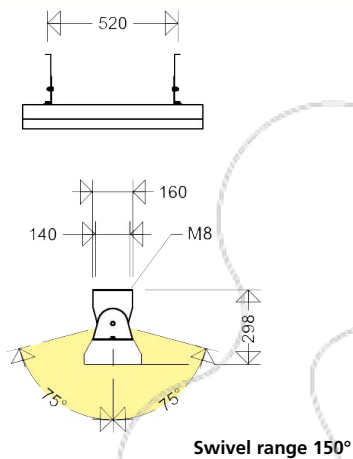
Article No.	Type	
18091 0021	EB 82. 12L	frame for narrow housing for 185 12L

## 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
18092 0002	SWA 181/182E	for all lamp lengths, consisting of 2 swivel brackets and screws M8 stainless steel



### Mounting material

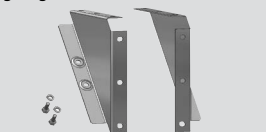
Suspension brackets H8V P



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	
<b>Spare glasses</b>		
82101 9002	821 12L	spare glass for 185 12L
<b>Cable entries/cable glands</b>		
25600 9000	2560	plastic cable gland M25 x 1,5
25720 9000	2572	threaded blanking plug M25 x 1,5
<b>Mounting material</b>		
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	WD45 VP	2 wall/ceiling angle 45°, steel, stainless steel (blasted)

## Vandal Proof LED Light Fittings

### Series 140 ...

#### Applications:

Subways, railway stations, underground stations, car parks, lavatories, schools, sport stadiums, stairways, bus-stops, prisons etc.,

#### Design:

**Housing:** stainless steel (1.4301), glass pearl blasted visible surfaces, covered cable tray and mounting holes at the back of the housing, high quality foamed silicone gasket.

**Cover:** hinged and removable clear polycarbonate diffuser with glass pearl blasted stainless steel end caps on the front sides, concealed joint with the cover.

**Reflector:** aluminium, white painted.

Easy to remove via keyholes, all electrical

components mounted, LED-modules with additional covers for glare limitation.

**Fasteners:** stainless steel, cover and end caps fixed with the stainless steel housing using safety screws M6 (TORX Tx30 with pin) counter-sunk in the end caps (special fasteners on request).

**Electrical connection:** 3-pole connection terminal; max. 2.5mm<sup>2</sup>.

**Cable entries:** 2 x Ø20mm with grommets at the back.

**Mounting system:** 4 holes 9 mm Ø, hidden at the back of the housing. Sealing and pressure disks can be found inside the fitting. Please use screws Ø 6mm for mounting.

#### Note:

For applications in seaside areas we do recommend a special version with housings made from high grade stainless steel 1.4571 with an additional powder coating.

#### Technical data:

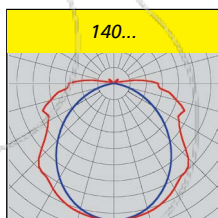
**LED:** Line modules 4,000K, CRI > 80, life expectancy L<sub>80</sub> > 50,000h at max. ambient temperature (see notes)

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

**Ambient temperature:** -20°C bis +35°C

#### Options:

- 6,500K
- painted sheet steel design (only for indoor use)
- stainless steel housing (1.4571), painted (for seaside areas)
- for higher ambient temperatures
- special paint finish in any RAL colour
- ECG with DALI interface for dimming (DIMD)
- for connection to group or central battery systems (ZB) or emergency mains respectively

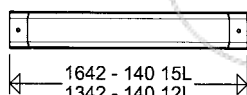
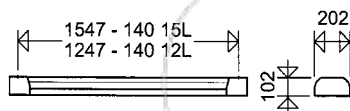


#### Product highlights:

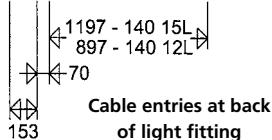
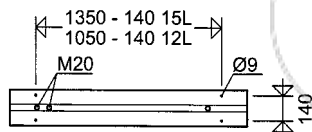
- sturdy version made of high-quality stainless steel
- rugged housing, end caps and polycarbonate diffuser due to angular design
- polycarbonate diffuser of high impact strength, IK value acc. to EN 50102 > 2 x IK 10 (≥ 40 joule min.)
- **homogeneous illumination** by using frosted covers (for glare limitation), no particular light points visible, comfortable perception of light, brilliant glare limitation
- safe function of the LED even in case of impacts or vibrations
- ECG and LED-modules replacable by end-user (no throw-away light fitting)
- **future proof** by using LED-modules according to Zhaga standard

STAINLESS STEEL  
corrosion resistant

>40J



#### Mounting holes at the back of light fitting



#### Cable entries at back of light fitting

Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] **	Energy efficiency class	Substitute for ca. *	Weight [kg] without packing material
-------------	------	--------------------------	-----------------------	-----------------------------	-------------------------	----------------------	--------------------------------------

### 140 ...



14005 0003	<b>140 12L22</b>	17	2.550	150	A++	1 x 36W	7,1
14005 0004	<b>140 12L42</b>	31	4.450	144	A++	2 x 36W	7,1
14005 0005	<b>140 15L34</b>	24	3.710	155	A++	1 x 58W	9,2
14005 0006	<b>140 15L60</b>	45	6.580	146	A++	2 x 58W	9,2

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

\*\* see notes

#### Notes:

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

See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Accessories / Spare Parts

Article No.	Type	
14011 9000	<b>140 036</b>	Spare glass PC clear with stainless steel and caps, for 140 12L.
14011 9001	<b>140 058</b>	Spare glass PC clear with stainless steel and caps, for 140 15L.
90063 9000	<b>2511</b>	blanking plug M20

## 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...

#### 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 2 M	Alu-rail 2 m long	3,03
90260 0002	TRS 2000 3 M	Alu-rail 3 m long	4,55
90260 0003	TRS 2000 5 M	Alu-rail 5 m long	7,58
90265 0005	TRS A 1	covering strip, 1 m long	0,04
90265 0006	TRS A 2	covering strip, 2 m long	0,07

#### Mounting Devices

Article no.	Type	Product
90265 0004	TRS V	stainless steel device (profile) for rail connection
90265 0002	TRS D	stainless steel ceiling bracket
90022 0001	KP 40	chain 1 m long with 2 eyelets for fastening and length compensation
90265 0001	TRS S	stainless steel swing hook for chain
90265 0003	TRS L	luminaire suspension device
90265 0010	TRS H	stainless steel luminaire mounting, for later installation

**Please note:** For mounting the sheet steel light fittings (such as series 181/182...) please use the mounting accessories of the ex-proof light fittings.

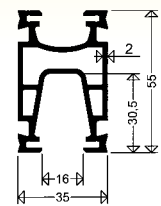
### AL...

#### aluminium carrier rails

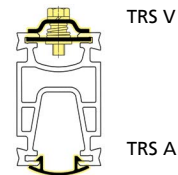
Article no.	Type	Product	Weight ca. [kg]
90005 0001	2 M AL	Alu-rail 2 m long	1,6
90005 0002	3 M AL	Alu-rail 3 m long	2,4
90005 0003	5 M AL	Alu-rail 5 m long	3,9

#### 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 luminaire mounting system complete



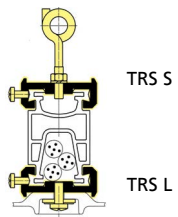
TRS H



TRS V



TRS A



TRS S

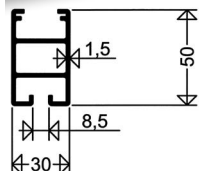


TRS D

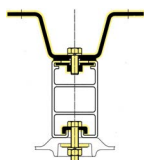


TRS L

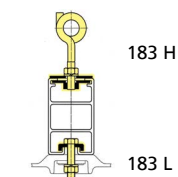
TRS L



183 H



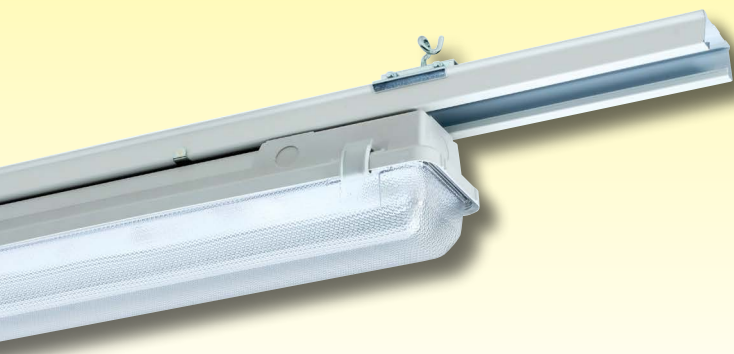
183 A



183 L

183 L





## 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)

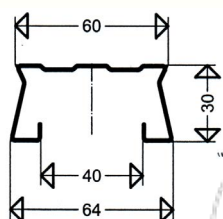
1538mm

### Mounting accessories:

Connection brackets (TRS 1000 V) – to be ordered separately – allows joining the

individual rails up to any length required.

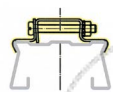
The carrier rails can either be mounted directly to the ceiling by means of the ceiling brackets (TRS 1000 D) or they can be suspended from the ceiling by means of hook (TRS 1000 S) in combination with chain (KP 40) (max. distance of mounting rail elements 2m). 2 or 3 devices (TRS 1000 L) serve for mounting 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).



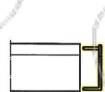
TRS 1000 S



TRS 1000 V



TRS 1000 A



TRS 1000 L

TRS 1000 D

TRS 1000 E

### 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 (5x1,5mm<sup>2</sup>) respectively 10A (5x2,5mm<sup>2</sup>).

## 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 0006	TRS 1000 D	ceiling bracket for mounting the carrier rails
90264 0002	TRS 1000 S	rail suspension device with hook for chain
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)

## 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:

1,5mm<sup>2</sup> up to 10A max.

2,5mm<sup>2</sup> 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

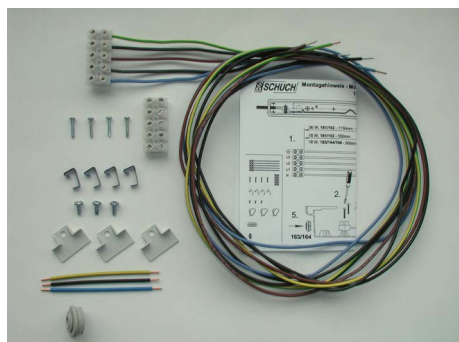
If through-wiring systems are wanted, we supply our dustproof/waterproof light fittings with standard through-wiring systems: 5x1,5mm<sup>2</sup> PVC.

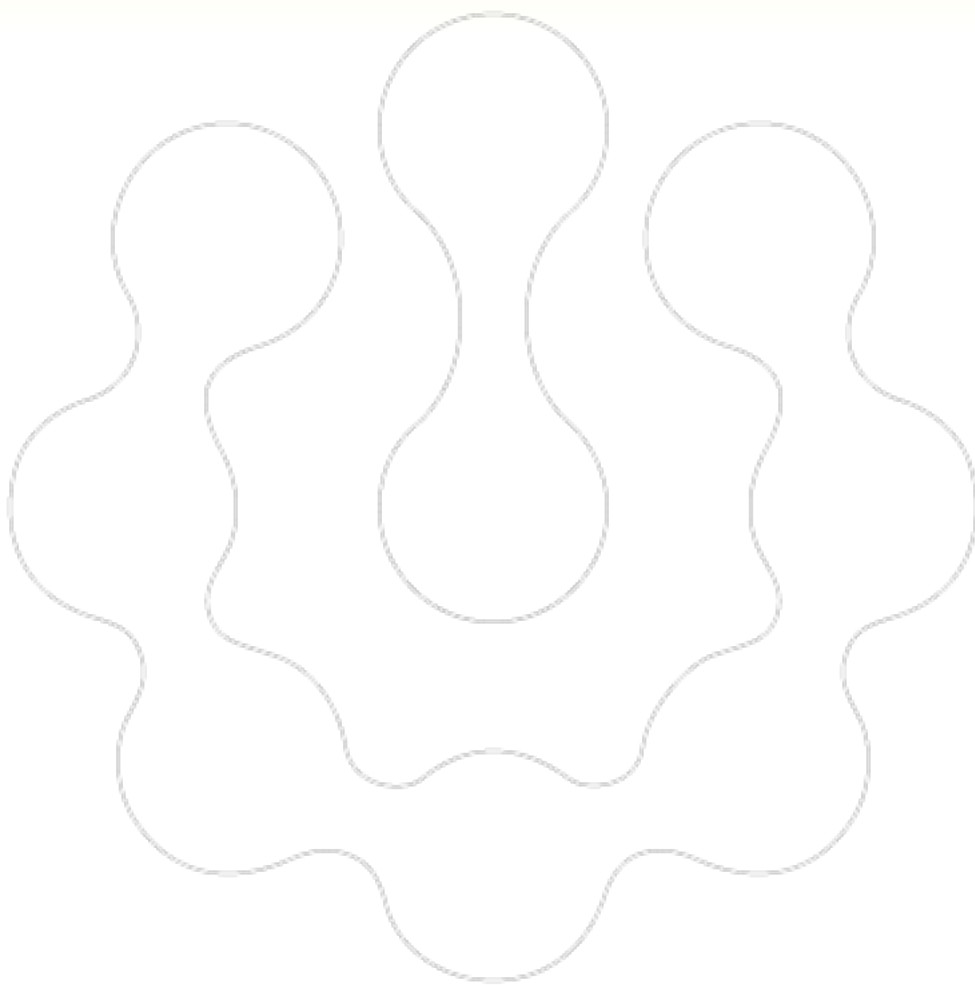
5x2,5mm<sup>2</sup> PVC and Silicone through-wiring systems are available on request.

**For retrofitting our retrofit kits must be used.**

### Through-wiring systems for subsequent installation:

Article no.	Type	Product
<b>Universal retrofit kits, suitable for 161/162/163/164...</b>		
11831 0013	DV/NS P 5x1,5	5x1,5mm <sup>2</sup> PVC, 105°C
11831 0022	DV/NS P 5x2,5	5x2,5mm <sup>2</sup> PVC, 105°C
11831 0014	DV/NS S 5x1,5	5x1,5mm <sup>2</sup> Silicone, 150°C
11831 0024	DV/NS S 5x2,5	5x2,5mm <sup>2</sup> Silicone, 150°C
<b>Universal retrofit kits, suitable for 167... G2 LUXANO</b>		
11831 0040	DV/NS P 3x1,5	3x1,5mm <sup>2</sup> PVC, 105°C
11831 0041	DV/NS P 3x2,5	3x2,5mm <sup>2</sup> PVC, 105°C
11831 0042	DV/NS P 5x1,5	5x1,5mm <sup>2</sup> PVC, 105°C
11831 0043	DV/NS P 5x2,5	5x2,5mm <sup>2</sup> PVC, 105°C
<b>Universal retrofit kits, suitable for 144...</b>		
11831 0030	DV/NS P 5x2,5	5x2,5mm <sup>2</sup> PVC, 105°C
11831 0031	DV/NS S 5x2,5	5x2,5mm <sup>2</sup> Silicone, 150°C







# 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.

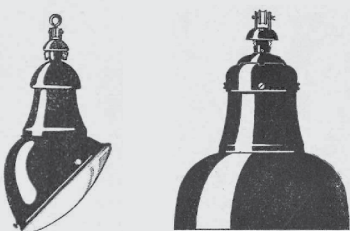
#### 2001

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.

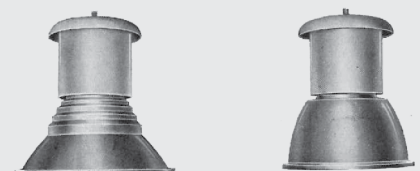
#### 2003

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.

Schrägstrahler / Breitstrahler  
Baureihe 290... von 1936



Industrie-Reflektorleuchten  
Baureihe 30.. von 1971





## High Bay Fittings

LED-Technology

Product	Series	Page
<b>High Bay Fittings</b>		
<i>with 2 point mounting</i>		
<b>DUEVO MID</b>	<b>3301/3302...</b>	86-89
<i>... for use in galvanising plants</i>	<b>3302... V</b>	89
<b>DUEVO XL MID</b>	<b>3305...</b>	90
<i>with 1 point mounting</i>		
<b>TRIANO Generation 2</b>	<b>3401/3402... G2</b>	92-93
<b>TRIANO L250 G2</b>	<b>3401 L250 G2</b>	94
<b>TRIANO L</b>	<b>3403...</b>	96
<b>TRIANO XL MID</b>	<b>3405...</b>	98
<b>Floodlights</b>		
<i>... for sand/glass blasting areas and cabins</i>		
<b>FOCO L</b>	<b>7700... SSK</b>	100
<b>FOCO XL</b>	<b>7800... SSK</b>	100

## 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

SCHUCH intensely investigates the influence of harmful gases on LED lights. The RESISTANT luminaire range develops from this.

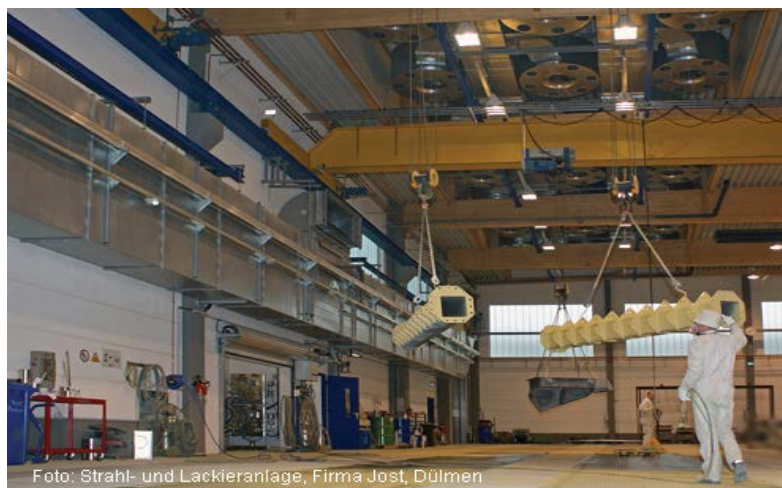
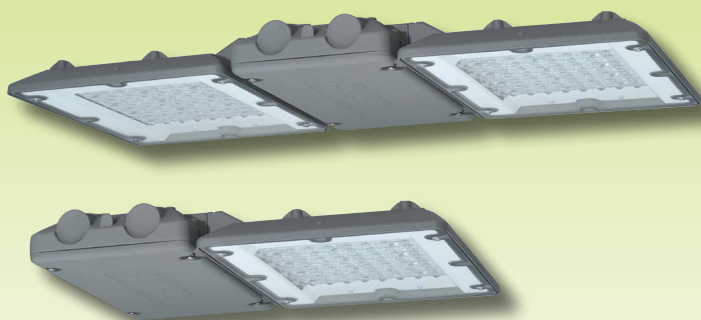


Foto: Strahl- und Lackieranlage, Firma Jost, Dülmen



## DUEVO MID

### LED High Bay Fitting

### Series 3301/3302...

#### Applications:

Production areas and warehouses, cool storage facilities, walkways in shelf areas, driveways etc.

#### Design:

Two versions are available: 1 (3301...) or 2 (3302...) LED-segments.  
Housing: Die-cast aluminum, DB 702N (mica-iron paint, grey). LED-segment with LED modules, optics behind tempered

safety glass (IK08). ECG housing with integrated electronic control gear, prewired on terminals.

Light distribution: Without optic 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: see Accessories.

#### Technical Data:

LED module: Complying Zhaga, 4,000K, CRI > 80, lifetime  $L_{70} > 100,000h$  at max. ambient temperature (see notes)

ECG: 220-240V, 50/60Hz, overload and s.

ECG: 220-240V, 50-60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

Ambient temperature: -20°C up to +50°C / +60°C (see article tables).

#### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

#### Corridor Mode (DIMC)

#### DALI interface (DIMD)

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

#### Further Options:

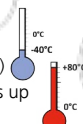
- 5,000K, light colour 850
- PMMA cover frosted (F) for glare limitation
- for low ambient temperatures down to -40°C (T40)
- for high ambient temperatures up to +80°C (H80)
- „D“-marking for rooms with higher fire risk (D)
- high protection (HR) against corrosive atmospheres or harmful gases

- version with additional threads for swivel arm brackets (swivel range 0° - 45°)

- ball sports proof version

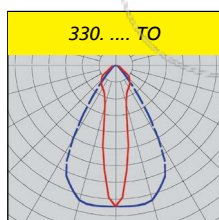
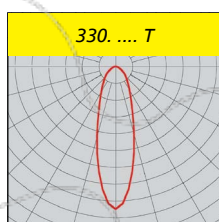
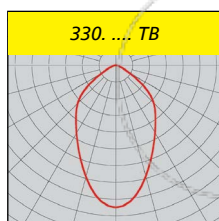
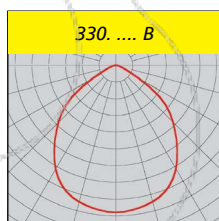
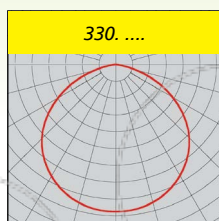
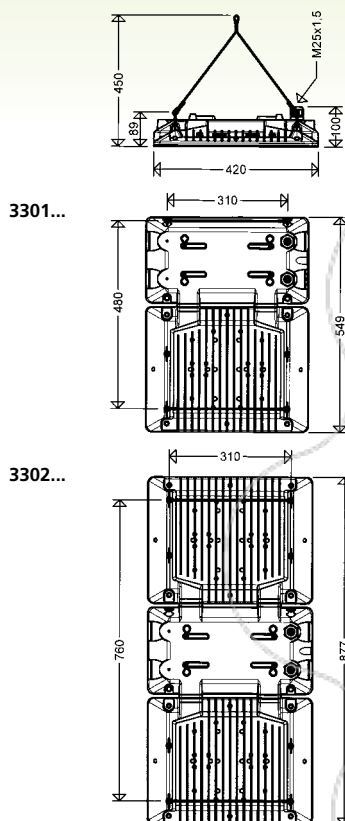
- for connection to group or central battery systems (ZB) or emergency mains respectively

- FastConnect connecting for electrical connection without accessing the internal terminal block



#### Product highlights:

- high system lifetime 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)
- future proof by using standardized LED-modules (Zhaga)



#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Quantity of ECG	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Substitute for *

## 3301...

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

1 LED wing

33010 0001	3301 L210	1	•				A++	8,0
33010 0002	3301 L210B	1	•				A++	8,1
33010 0013	3301 L210TB	1		•			A++	8,1
33010 0003	3301 L210T	1			•		A++	8,1
33010 0014	3301 L210TO	1			•		A++	8,0
33010 0200	3301 L210 DIMD	1	•	•			A++	8,1
33010 0201	3301 L210B DIMD	1	•	•			A++	8,1
33010 0212	3301 L210TB DIMD	1	•	•	•		A++	8,1
33010 0202	3301 L210T DIMD	1	•		•		A++	8,1
33010 0213	3301 L210TO DIMD	1	•		•		A++	8,1

135 20.200 150 HIE 400

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

33010 0004	3301 L110 H60	1	•				A++	8,0
33010 0006	3301 L110B H60	1	•				A++	8,1
33010 0015	3301 L110TB H60	1		•			A++	8,1
33010 0008	3301 L110T H60	1			•		A++	8,1
33010 0203	3301 L110 DIMD H60	1	•	•			A++	8,0
33010 0205	3301 L110B DIMD H60	1	•	•			A++	8,1
33010 0214	3301 L110TB DIMD H60	1	•	•	•		A++	8,1
33010 0207	3301 L110T DIMD H60	1	•		•		A++	8,1
33010 0005	3301 L160 H60	1	•				A++	8,0
33010 0007	3301 L160B H60	1	•				A++	8,1
33010 0016	3301 L160TB H60	1		•			A++	8,1
33010 0009	3301 L160T H60	1			•		A++	8,1
33010 0204	3301 L160 DIMD H60	1	•	•			A++	8,0
33010 0206	3301 L160B DIMD H60	1	•	•			A++	8,1
33010 0215	3301 L160TB DIMD H60	1	•	•	•		A++	8,1
33010 0208	3301 L160T DIMD H60	1	•		•		A++	8,1

67 10.800 161 HME 250

96 15.000 156 HIT 250/HME 400

## 3302...

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

2 LED wings

33020 0001	3302 L420	2	•				A++	13,1
33020 0002	3302 L420B	2	•				A++	13,3
33020 0013	3302 L420TB	2		•			A++	13,3
33020 0003	3302 L420T	2			•		A++	13,3
33020 0014	3302 L420TO	2			•		A++	13,3
33020 0200	3302 L420 DIMD	2	•	•			A++	13,2
33020 0201	3302 L420B DIMD	2	•	•			A++	13,4
33020 0212	3302 L420TB DIMD	2	•	•	•		A++	13,4
33020 0202	3302 L420T DIMD	2	•		•		A++	13,4
33020 0213	3302 L420TO DIMD	2	•		•		A++	13,4

270 40.400 150 2 x HIE 400

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

33020 0004	3302 L220 H60	2	•				A++	13,1
33020 0006	3302 L220B H60	2	•				A++	13,3
33020 0015	3302 L220TB H60	2		•			A++	13,3
33020 0008	3302 L220T H60	2			•		A++	13,3
33020 0203	3302 L220 DIMD H60	2	•	•			A++	13,1
33020 0205	3302 L220B DIMD H60	2	•	•			A++	13,3
33020 0214	3302 L220TB DIMD H60	2	•	•	•		A++	13,3
33020 0207	3302 L220T DIMD H60	2	•		•		A++	13,3
33020 0005	3302 L320 H60	2	•				A++	13,1
33020 0007	3302 L320B H60	2	•				A++	13,3
33020 0016	3302 L320TB H60	2		•			A++	13,3
33020 0009	3302 L320T H60	2			•		A++	13,3
33020 0204	3302 L320 DIMD H60	2	•	•			A++	13,1
33020 0206	3302 L320B DIMD H60	2	•	•			A++	13,3
33020 0215	3302 L320TB DIMD H60	2	•	•	•		A++	13,3
33020 0208	3302 L320T DIMD H60	2	•		•		A++	13,3

134 21.600 161 HIE 400

192 30.000 156 HIT 400

\* This date is a rough guideline. In individual cases a lighting calculation is required.  
\*\* see notes

High Bay  
Fittings



Article no.	Type	Quantity of ECG	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Substitute for *
<b>3301/3302... IFS</b>									  			

#### 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 wing

33010 0010	<b>3301 L210 IFS</b>	1	•			A++	6,9
33010 0011	<b>3301 L210B IFS</b>	1	•			A++	7,0
33010 0017	<b>3301 L210TB IFS</b>	1		•		A++	7,0
33010 0012	<b>3301 L210T IFS</b>	1			•	A++	7,0
33010 0209	<b>3301 L210 DIMD IFS</b>	1	•	•		A++	7,0
33010 0210	<b>3301 L210B DIMD IFS</b>	1	•	•		A++	7,1
33010 0216	<b>3301 L210TB DIMD IFS</b>	1	•		•	A++	7,1
33010 0211	<b>3301 L210T DIMD IFS</b>	1	•		•	A++	7,1

135 20.200 150 HIE 400

##### 2 LED wings

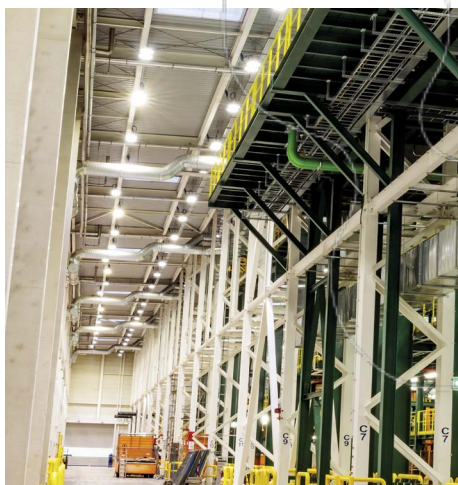
33020 0010	<b>3302 L420 IFS</b>	2	•			A++	11,0
33020 0011	<b>3302 L420B IFS</b>	2	•			A++	11,2
33020 0017	<b>3302 L420TB IFS</b>	2		•		A++	11,2
33020 0012	<b>3302 L420T IFS</b>	2			•	A++	11,2
33020 0209	<b>3302 L420 DIMD IFS</b>	2	•	•		A++	11,1
33020 0210	<b>3302 L420B DIMD IFS</b>	2	•	•		A++	11,3
33020 0216	<b>3302 L420TB DIMD IFS</b>	2	•		•	A++	11,3
33020 0211	<b>3302 L420T DIMD IFS</b>	2	•		•	A++	11,3

270 40.400 150 2 x HIE 400

Optional also available for ambient temperatures up to +60°C

\* This data is a rough guideline. In individual cases a lighting calculation is required.

\*\* see notes



## Accessories / Spare Parts

Article no.	Type	
33001 9001	<b>3301/010</b>	spare safety glass (for 3302... 2 glasses per fitting necessary)
33001 9006	<b>3301/010 IFS</b>	PC cover for use in the food industry (IFS) (for 3302... 2 covers per fitting necessary)
33001 9010	<b>3301/010 F</b>	PMMA-cover, frosted for glare limitation (for 3302... 2 covers per fitting necessary)
25600 9000	<b>2560</b>	plastic gland M25x1,5
25720 9000	<b>2572</b>	plastic plug M25x1,5
33001 9004	<b>3301/3302 Y P</b>	1 pair of Y-ropes, (2-point-mounting)
33001 9002	<b>3301/3302 D</b>	1 pair of brackets for direct ceiling mounting <sup>1)</sup>
33001 9013	<b>3301/3302 SD</b>	vibration absorbing suspension device <sup>1)</sup>
<b>For the following mounting versions additional mounting holes are required on the luminaire. Please indicate the way of mounting when ordering the luminaire. Not retrofittable!</b>		
33001 9008	<b>3301 D BS</b>	1 pair of ceiling mountings, ball sports proof for series 3301 <sup>1)</sup>
33001 9009	<b>3302 D BS</b>	1 pair of ceiling mountings, ball sports proof for series 3302 <sup>1)</sup>
33001 9003	<b>3301 W</b>	1 swivel arm, adjustable, for wall mounting series 3301... <sup>1)</sup>
33001 9007	<b>3302 W</b>	1 swivel arm, adjustable, for wall mounting series 3302... <sup>1)</sup>

<sup>1)</sup> 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 702N (mica-iron paint, grey).

LED-segment with LED modules, optics behind tempered safety glass (IK08).

ECG housing 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) **FastConnect-quick connector**, plug mounted to the housing, socket included.

Mounting: 4-point suspension.

##### Technical Data:

LED module: Complying Zhaga, 4,000K, CRI > 80, lifetime L<sub>70</sub> > 100,000h at max. ambient temperature (see notes).

ECG: 220-240V, 50-60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

Ambient temperature: -40°C up to +50°C

##### Options:

On request also available with the following configurations (please mention in your enquiry or order):

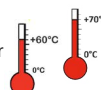
DALI interface (DIMD)

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

##### Further Options:

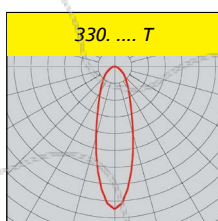
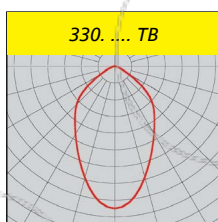
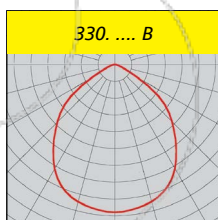
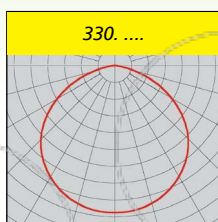
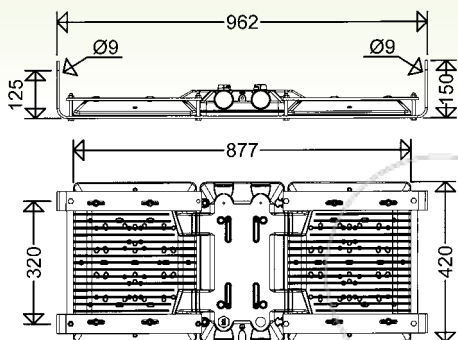
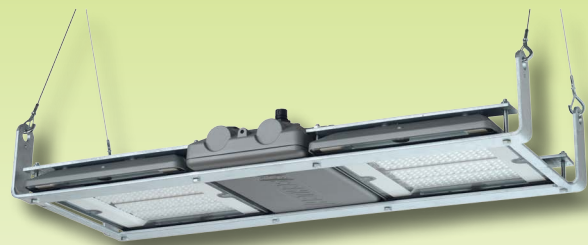
- 5,000K, light colour 850
- „D“-marking for rooms with higher fire risk (D)

- for high ambient temperatures up to +60°C (H60) or +70°C (H70)



##### Product highlights:

- extremely robust special-version
- high system lifetime 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
- future proof by using standardized LED-modules (Zhaga)



##### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Quantity of ECG	Wide beam	Narrow wide beam	Narrow beam	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Substitute for *
3302... V											

### 3302... V

33020 0100	3302 L420 V	2	•			A++	24,0
33020 0101	3302 L420B V	2	•			A++	24,2
33020 0102	3302 L420TB V	2		•		A++	24,2
33020 0103	3302 L420T V	2			•	A++	24,2

270	40.400	150	2 x HIE 400
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\* This date is a rough guideline. In individual cases a lighting calculation is required. \*\* see notes

### Accessories / Spare Parts

Type	Article no.	
33001 9001	3301/010	spare safety glass (for 3302... 2 glasses per fitting necessary)

# 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 702N (mica-iron paint, grey). **4 segments** with LED module, optics behind tempered safety glass (IK08). **2 ECG housings** with

integrated electronic control gear, prewired 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: 2 parts

#### Technical Data:

**LED module:** Complying Zhaga, 4,000K, CRI > 80, lifetime L70 > 100,000h at max. ambient temperature (see notes).

**ECG:** 220-240V, 50-60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Ambient temperature:** -25°C up to +50°C / +60°C (see article tables).

#### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

#### Corridor Mode (DIMC)

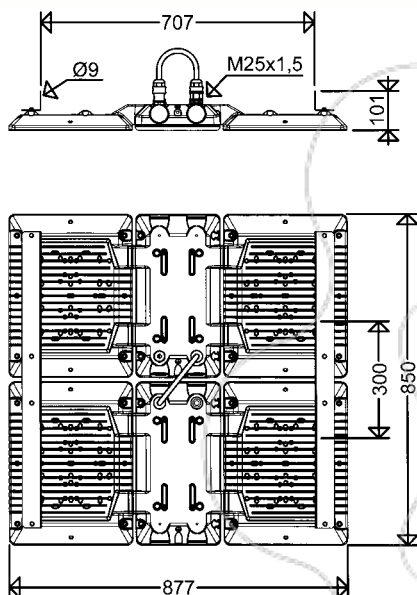
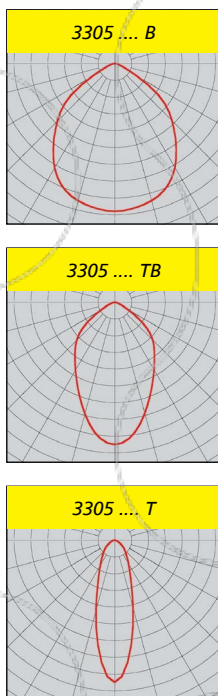
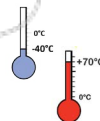
#### DALI interface (DIMD)

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

#### Further Options:

- 5,000K, light colour 850
- PMMA cover frosted (F) for glare limitation
- for low ambient temperatures down to -40°C (T40)
- for high ambient temperatures up to +70°C (H70)

- „D“-marking for rooms with higher fire risk (D)
- FastConnect connecting for electrical connection without accessing the internal terminal block



#### Product highlights:

- high system lifetime 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)
- future proof by using standardized LED-modules (Zhaga)

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Quantity of ECG	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [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	4	•				A++	28,4
33050 0058	3305 L840TB	4		•			A++	28,4
33050 0051	3305 L840T	4			•		A++	28,4
33050 0200	3305 L840B DIMD	4	•	•			A++	28,6
33050 0208	3305 L840TB DIMD	4	•		•		A++	28,6
33050 0201	3305 L840T DIMD	4	•		•		A++	28,6

540	80.800	150	2 x HIT 400 1 x HME 1000
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### ... for ambient temperatures up to +60°C

33050 0052	3305 L440B H60	4	•				A++	28,4
33050 0059	3305 L440TB H60	4		•			A++	28,4
33050 0054	3305 L440T H60	4			•		A++	28,4
33050 0202	3305 L440B DIMD H60	4	•	•			A++	28,4
33050 0209	3305 L440TB DIMD H60	4	•		•		A++	28,4
33050 0204	3305 L440T DIMD H60	4	•		•		A++	28,4
33050 0053	3305 L640B H60	4	•				A++	28,4
33050 0060	3305 L640TB H60	4		•			A++	28,4
33050 0055	3305 L640T H60	4			•		A++	28,4
33050 0203	3305 L640B DIMD H60	4	•	•			A++	28,4
33050 0210	3305 L640TB DIMD H60	4	•		•		A++	28,4
33050 0205	3305 L640T DIMD H60	4	•		•		A++	28,4

268	43.200	161	2 x HIT 250 HME 400
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384	60.000	156	2 x HIT 400 1 x HME 1000
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\* This data is a rough guideline. In individual cases a lighting calculation is required.  
\*\* see notes

## 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	4	•				A++	24,4
33050 0061	3305 L840TB IFS	4		•			A++	24,4
33050 0057	3305 L840T IFS	4			•		A++	24,4
33050 0206	3305 L840B DIMD IFS	4	•	•			A++	24,6
33050 0211	3305 L840TB DIMD IFS	4	•		•		A++	24,6
33050 0207	3305 L840T DIMD IFS	4	•		•		A++	24,6

540	80.800	150	2 x HIT 400 1 x HME 1000
-----	--------	-----	-----------------------------

\* This data is a rough guideline. In individual cases a lighting calculation is required.  
\*\* see notes

High Bay  
Fittings

## Accessories / Spare Parts

Article no.	Type	
33001 9001	3301/010	spare safety glass 4 glasses per fitting necessary
33001 9006	3301/010 IFS	PC cover for use in the food industry (IFS) 4 glasses per fitting necessary
33001 9010	3301/010 F	PMMA-cover, frosted for glare limitation 4 glasses per fitting necessary
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 2<sup>nd</sup> 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 DB702N (mica-iron paint, grey).

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

**Connection:** Plug-type connector (**Fast-Connect**), 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

##### Technical Data:

**LED module:** 5,000K, CRI > 80, lifetime L<sub>80</sub> > 100,000h at 25°C ambient temperature, lifetime L<sub>70</sub> > 70,000h at max. ambient temperature (see notes).

**ECG:** 220-240V, 50-60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Ambient temperature:** -20°C up to see article tables

##### Options:

On request also available with the following configurations (please mention in your enquiry or order):

##### 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.

##### Corridor Mode (DIMC)

##### DALI interface (DIMD)

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

##### Further Options:

- 4.000K, light-colour 840
- 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)

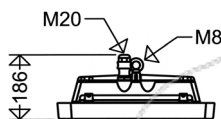
– **▽-sign** for locations with increased fire risk (D)

– silicone free

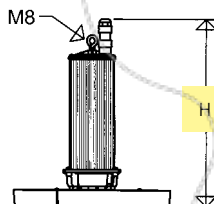
– for high ambient temperatures up to +70°C (H70)



3401 L... G2

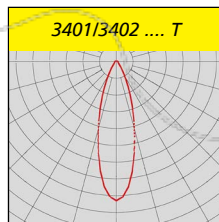
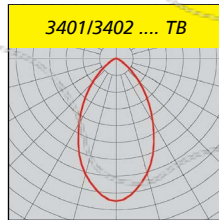
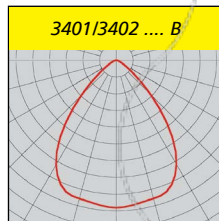
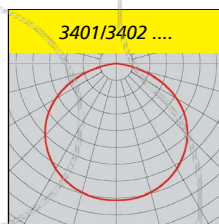


3402 L... G2



##### Series

Baureihe	H [mm]
3402 L180 DIMD	590
3402 L250	510
3402 L250 DIMD	510



##### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

##### Product highlights:

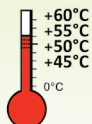
- fast mounting and commissioning due to 1-point suspension and FastConnect quick-connector
- high quality ECG with overload and short circuit protection
- optimized thermal management due to segmentation of the LED modules and direct mounting to the housing. Huge heat sink, excellent heat dissipation, excellent convection
- high system lifetime 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
- 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.

Article no.	Type	Quantity of ECG	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Tmax [°C]	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Substitute for *
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## 3401/3402... G2

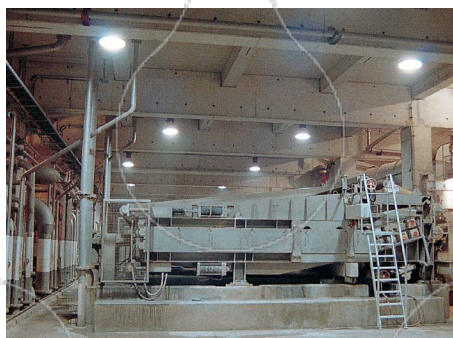
Versions with PC-Optics are suitable for use in IFS-applications!



34010 0100	<b>3401 L120 G2</b>	1	•				55	A++	6,3	84	13.500	161	HME250
34010 0102	<b>3401 L120 G2 DIMD</b>	1	•	•			55	A++	6,3				
34010 0101	<b>3401 L180 G2</b>	1	•				50	A++	6,3				
34010 0112	<b>3401 L180B G2</b>	1	•				50	A++	6,1				
34010 0111	<b>3401 L180TB G2</b>	1			•		50	A++	6,1				
34010 0122	<b>3401 L180T G2</b>	1				•	50	A++	6,1	123	20.000	163	HIT250 HME400 HIE 400 (HI-VG)
34010 0401	<b>3402 L180 G2 DIMD</b>	1	•	•			60	A++	8,2				
34010 0414	<b>3402 L180B G2 DIMD</b>	1	•	•			60	A++	8,0				
34010 0413	<b>3402 L180TB G2 DIMD</b>	1	•		•		60	A++	8,0				
34010 0432	<b>3402 L180T G2 DIMD</b>	1	•			•	60	A++	8,0				
34010 0400	<b>3402 L250 G2</b>	3	•	•			45	A++	8,1				
34010 0416	<b>3402 L250B G2</b>	3	•				45	A++	7,9				
34010 0415	<b>3402 L250TB G2</b>	3			•		45	A++	7,9				
34010 0433	<b>3402 L250T G2</b>	3				•	45	A++	7,9				
34010 0402	<b>3402 L250 G2 DIMD</b>	3	•	•			45	A++	8,1	198	29.500	149	HIT400 HIE400 (HS-VG)
34010 0417	<b>3402 L250B G2 DIMD</b>	3	•	•			45	A++	7,9				
34010 0412	<b>3402 L250TB G2 DIMD</b>	3	•		•		45	A++	7,9				
34010 0434	<b>3402 L250T G2 DIMD</b>	3	•			•	45	A++	7,9				

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)



High Bay  
Fittings

## Accessories / Spare Parts

Article no.	Type	
34011 9001	<b>3401/010</b>	spare safety glass, for BR 3401/3402... (3 glasses per fitting necessary)
34011 9002	<b>3401/010 IFS</b>	PC cover, for BR 3401/3402... IFS (3 glasses per fitting necessary)
34011 9003	<b>3401/011</b>	spare cover PMMA, prismatic structure for BR 3401/3402 (3 pieces per fitting necessary)
34011 9004	<b>3401/012 B</b>	spare cover PC, wide beam for BR 3401/3402... B 3 (3 glasses per fitting necessary)
34011 9005	<b>3401/012 TB</b>	spare cover PC, narrow-wide beam for BR 3401/3402... TB (3 glasses per fitting necessary)
34011 9006	<b>3401/012 T</b>	spare cover PC, narrow beam for BR 3401/3402... T (3 glasses per fitting necessary)



NEW

# TRIANO 2<sup>nd</sup> Generation

## LED High Bay Fitting

### Series 3401 L250 G2



#### Applications:

Production areas and warehouses, maintenance and assembly shops, cool storage facilities, walkways in rack areas, hardware stores etc.

#### Design:

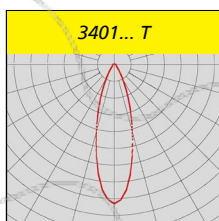
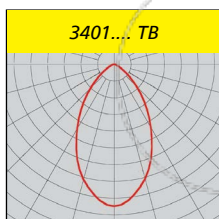
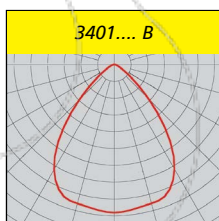
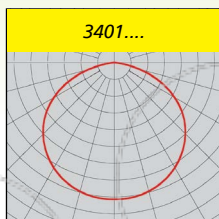
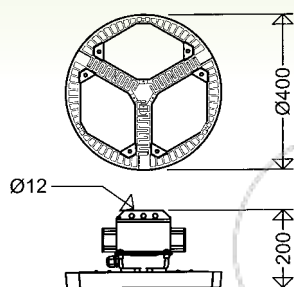
**LED-segment:** Robust three-part cast aluminium housing with cooling fins, LED-modules and flat safety glasses (IK09), versions B, TB or T with PC-cover and incorporated optics. All case parts powder coated in DB702N (mica-iron paint, grey).

**ECG-housing:** Extruded aluminium.

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

**Connection:** 3-pole plug-type connector (FastConnect), socket included.

**Mounting:** 1-point suspension.



#### Technical Data:

**LED module:** 5,000K, CRI > 80, lifetime L<sub>80</sub> > 100,000h at 25°C ambient temperature, lifetime L<sub>70</sub> > 70,000h at max. ambient temperature (see notes).

**ECG:** 220-240V, 50-60Hz, Surge voltage resistance 6kV, overload and short circuit protection.

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Ambient temperature:** -40°C up to +50°C

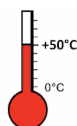
#### Options:

- 4,000K, light-colour 840
- PC cover for application in food industry areas (IFS Food)

#### Product highlights:

- optimized for high economic efficiency:
  - quicker replacement of the ECG
  - favorable price
  - higher max. permissible ambient temperatures
- 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 lifetime 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
- 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.

Versions with PC-Optics are suitable for use in IFS-applications!



Article no.	Type	Quantity of ECG	Wide beam	Narrow wide beam	Narrow beam	Tmax [°C]	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Substitute for *
34010 0123	3401 L250 G2	1	•			50	A++	6,3				
34010 0124	3401 L250B G2	1	•			50	A++	6,1				
34010 0125	3401 L250TB G2	1		•		50	A++	6,1				
34010 0126	3401 L250T G2	1			•	50	A++	6,1				

## 3401 L250 G2



34010 0123	3401 L250 G2	1	•			50	A++	6,3	198	29.500	149	HIE400 (HS-VG)/HIT400
34010 0124	3401 L250B G2	1	•			50	A++	6,1				
34010 0125	3401 L250TB G2	1		•		50	A++	6,1				
34010 0126	3401 L250T G2	1			•	50	A++	6,1				

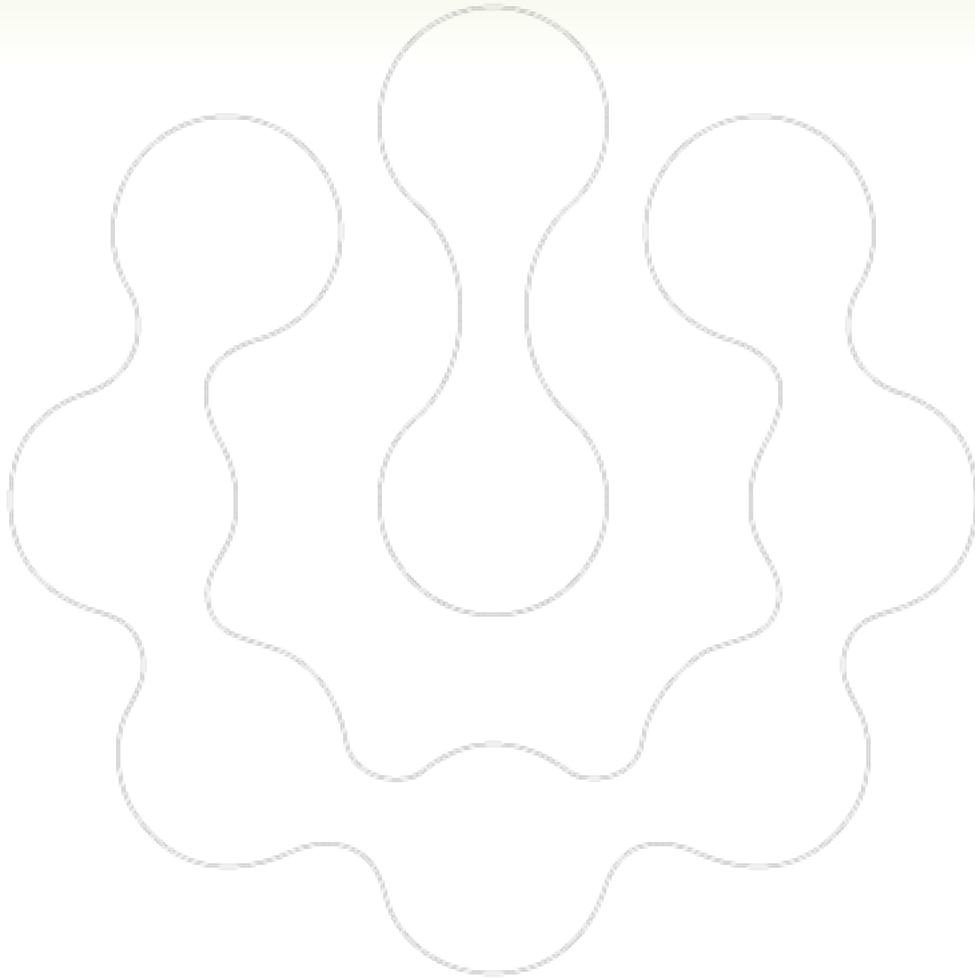
\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



## Accessories / Spare Parts

Article no.	Type	
34011 9001	<b>3401/010</b>	spare safety glass, for BR 3401/3402... (3 glasses per fitting necessary)
34011 9002	<b>3401/010 IFS</b>	PC cover, for BR 3401/3402... <b>IFS</b> (3 glasses per fitting necessary)
34011 9003	<b>3401/011</b>	spare cover PMMA, prismatic structure for BR 3401/3402 (3 pieces per fitting necessary)
34011 9004	<b>3401/012 B</b>	spare cover PC, wide beam for BR 3401/3402... <b>B</b> 3 (3 glasses per fitting necessary)
34011 9005	<b>3401/012 TB</b>	spare cover PC, narrow-wide beam for BR 3401/3402... <b>TB</b> (3 glasses per fitting necessary)
34011 9006	<b>3401/012 T</b>	spare cover PC, narrow beam for BR 3401/3402... <b>T</b> (3 glasses per fitting necessary)



## 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-segment:** 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 DB702N (mica-iron paint, grey).

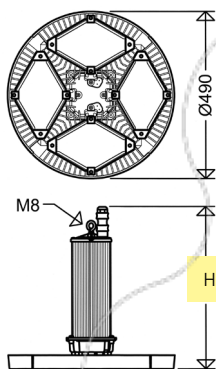
**Light distribution:** Without optics wide beam, with optics wide (B) narrow-wide (TB) or narrow-beam (T).

**Connection:** Preinstalled 3-pole (DIMD 5-pole) plug-type connector (**Fast-Connect**), plug mounted to the housing, socket included.

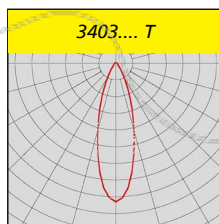
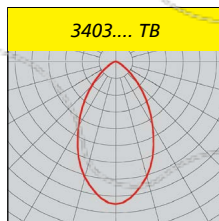
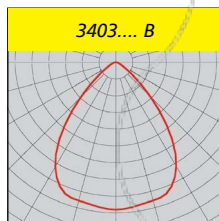
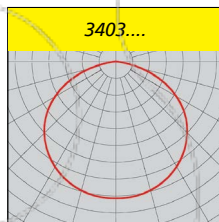
**Mounting:** 1-point suspension, eyelet included.

**Delivery status:**

2 parts: LED-segments and ECG-housing



Series	H [mm]
3403 ...	510
3403 L380.. DIMD	590



#### Technical Data:

**LED module:** 5,000K, CRI > 80, lifetime L<sub>80</sub> > 100,000h at 25°C ambient temperature, lifetime L<sub>70</sub> > 70,000h at max. ambient temperature (see notes).

**ECG:** 220-240V, 50-60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Ambient temperature:** -20°C up to see article tables

#### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

#### Corridor Mode (DIMC)

#### DALI interface (DIMD)

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

#### Further Options:

- 4,000K, light-colour 840
- for connection to group or central battery systems (ZB) or emergency mains respectively
- PC cover for application in food industry areas (IFS Food)

- ▽-sign for locations with increased fire risk (D)
- 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 lifetime of up to 100,000h (25°C), >70,000h at maximum ambient temperature
- colour reproduction Ra > 80, according to the workplace guide lines suitable for nearly all plant locations
- 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.

#### Notes:

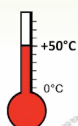
Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Versions with PC-Optics are suitable for use in IFS-applications!

Article no.	Type	Quantity of ECG	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Tmax [°C]	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Substitute for *
<b>3403...</b>										LED	IP65		



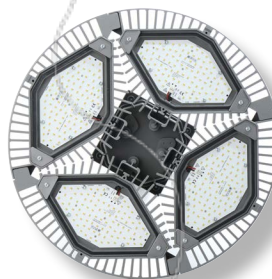
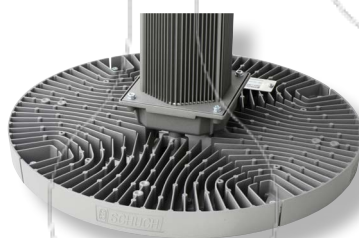
34030 0001	<b>3403 L260</b>	2	•				60	A++	8,9
34030 0003	<b>3403 L260B</b>	2	•				60	A++	8,9
34030 0004	<b>3403 L260TB</b>	2		•			60	A++	8,9
34030 0008	<b>3403 L260T</b>	2			•		60	A++	8,9
34030 0200	<b>3403 L260 DIMD</b>	2	•	•			60	A++	8,9
34030 0202	<b>3403 L260B DIMD</b>	2	•	•			60	A++	8,9
34030 0203	<b>3403 L260TB DIMD</b>	2	•		•		60	A++	8,9
34030 0206	<b>3403 L260T DIMD</b>	2	•			•	60	A++	8,9
34030 0002	<b>3403 L380</b>	2	•				50	A++	8,9
34030 0005	<b>3403 L380B</b>	2	•				50	A++	8,9
34030 0006	<b>3403 L380TB</b>	2		•			50	A++	8,9
34030 0009	<b>3403 L380T</b>	2			•		50	A++	8,9
34030 0201	<b>3403 L380 DIMD</b>	2	•	•			50	A++	9,7
34030 0204	<b>3403 L380B DIMD</b>	2	•	•			50	A++	9,7
34030 0205	<b>3403 L380TB DIMD</b>	2	•		•		50	A++	9,7
34030 0207	<b>3403 L380T DIMD</b>	2	•			•	50	A++	9,7

166	27.000	163	HIT400 HIE400 (HS-VG)
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256	39.500	154	HME700 HPI400
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\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)

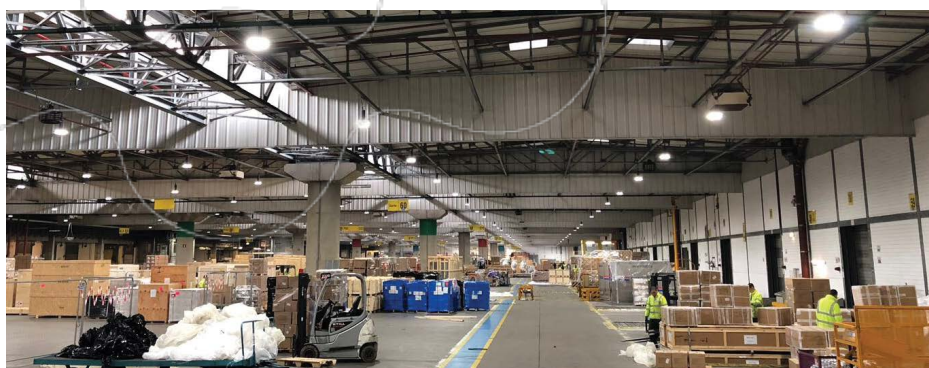


#### Excellent Thermo-Management by unique Design!

Each LED-Segment is completely surrounded by a high efficient cooling finn block.

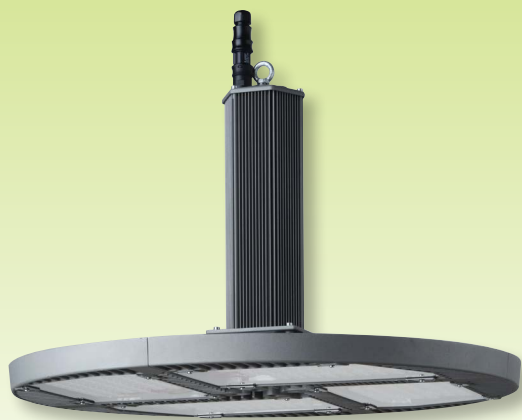
Such design creates a permanent air flow within the LED-Segments. It cools perfectly and avoids dust sitting on it that could destroy the thermo-management.

**Outcome: Operation in high ambient environment plus long life cycle.**



## Accessories / Spare Parts

Article no.	Type	
34011 9001	<b>3401/010</b>	spare safety glass, for BR 3401/3402... (4 glasses per fitting necessary)
34011 9002	<b>3401/010 IFS</b>	PC cover, for BR 3401/3402... IFS (4 glasses per fitting necessary)
34011 9003	<b>3401/011</b>	spare cover PMMA, prismatic structure for BR 3401/3402 (3 pieces per fitting necessary)
34011 9004	<b>3401/012 B</b>	spare cover PC, wide beam for BR 3401/3402... B 3 (4 glasses per fitting necessary)
34011 9005	<b>3401/012 TB</b>	spare cover PC, narrow-wide beam for BR 3401/3402... TB (4 glasses per fitting necessary)
34011 9006	<b>3401/012 T</b>	spare cover PC, narrow beam for BR 3401/3402... T (4 glasses per fitting necessary)



## TRIANO XL MID 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-segment:** Robust four-part extruded aluminium housing with cooling fins, LED-modules and flat safety glasses (IK 09)  
All case parts powder coated in DB702N (mica-iron paint, grey).

**ECG-housing:** Extruded aluminium with cooling fins.

**Light distribution:** With optics wide (B), narrow-wide (TB) or narrow beam (T).

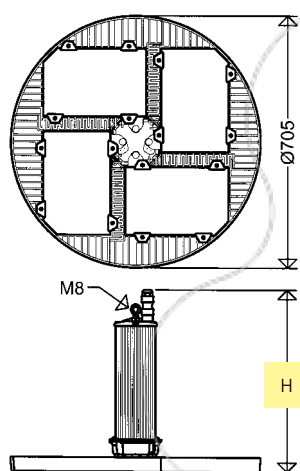
**Connection:** FastConnect. Plug mounted to the housing.

Socket included

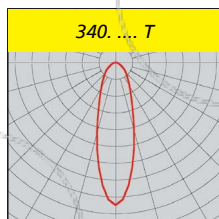
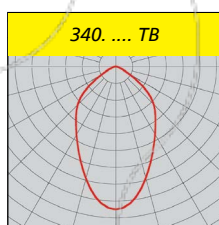
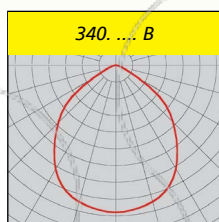
**Mounting:** 1-point suspension, eyelet included.

Delivery status:

2 parts: LED-segments and ECG-housing.



Series	H [mm]
3405 ...	510
3405 L630.. DIMD	590



### Technical Data:

**LED module:** Complying Zhaga, 4,000K, CRI > 80, lifetime L70 > 100,000h at max. ambient temperature (see notes)

**ECG:** 220-240V, 50-60Hz, Surge voltage resistance 4kV, overload and short circuit protection.

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Ambient temperature:** -25°C up to +50°C / +60°C (see article tables).

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

#### Corridor Mode (DIMC)

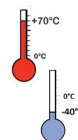
#### DALI interface (DIMD)

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

### Further 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)



### 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
- 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.
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Quantity of ECG	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Tmax [°C]	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Substitute for *
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## 3405...



34050 0050	<b>3405 L340B</b>	3	•				60	A++	19,8
34050 0056	<b>3405 L340TB</b>	3		•			60	A++	19,8
34050 0053	<b>3405 L340T</b>	3			•		60	A++	19,8
34050 0200	<b>3405 L340B DIMD</b>	3	•	•			60	A++	20,4
34050 0206	<b>3405 L340TB DIMD</b>	3	•		•		60	A++	20,4
34050 0203	<b>3405 L340T DIMD</b>	3	•			•	60	A++	20,4

200 32.000 160 HIT 400

34050 0051	<b>3405 L470B</b>	3	•				60	A++	19,8
34050 0057	<b>3405 L470TB</b>	3		•			60	A++	19,8
34050 0054	<b>3405 L470T</b>	3			•		60	A++	19,8
34050 0201	<b>3405 L470B DIMD</b>	3	•	•			60	A++	20,4
34050 0207	<b>3405 L470TB DIMD</b>	3	•		•		60	A++	20,4
34050 0204	<b>3405 L470T DIMD</b>	3	•			•	60	A++	20,4

285 45.000 158 HIT 400  
HME 700

34050 0052	<b>3405 L630B</b>	3	•				50	A++	19,8
34050 0058	<b>3405 L630TB</b>	3		•			50	A++	19,8
34050 0055	<b>3405 L630T</b>	3			•		50	A++	19,8
34050 0202	<b>3405 L630B DIMD</b>	3	•	•			50	A++	20,4
34050 0208	<b>3405 L630TB DIMD</b>	3	•		•		50	A++	20,4
34050 0205	<b>3405 L630T DIMD</b>	3	•			•	50	A++	20,4

405 60.000 148 2 x HIT 400  
HME 1000

\* see notes

\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)



High Bay  
Fittings

## Accessories / Spare Parts

Article no.	Type	
34011 9011	<b>3405/010</b>	spare safety glass, for BR 3405... (4 glasses per fitting necessary)



NEW

## FOCO L / XL

### LED Floodlight for sand/glass blasting area

#### Series 7700... SSK / 7700... SSK

##### Application:

Blasting cubicles and areas in which products are sand and glasspearl blasted

##### Design:

**Housing:** Die-cast aluminium, 2-parts, powder coated DB702N (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 mm<sup>2</sup>.

**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:** Zhaga compliant, 4,000K, R<sub>a</sub> > 80, lifetime L<sub>80</sub> > 100,000h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

**Ambient temperature:** -40°C up to +35°C

##### Options:

On request also available with the following configurations (please mention in your enquiry or order):

**DALI interface (DIMD)**

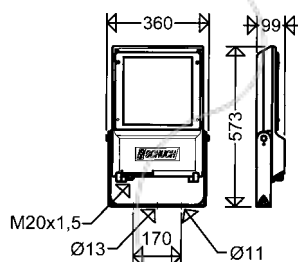
**1-10V (DIMA)**

##### Further Options:

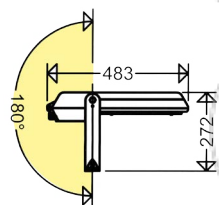
— various other light distributions e. g. TB (narrow-wide beam) and T (narrow beam) available

— special painting in all RAL colours

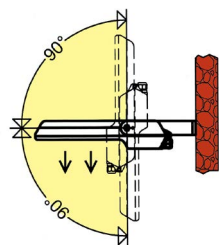
#### Series 7700... SSK



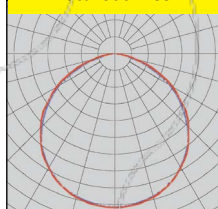
#### Swivel range



#### Standard Mounting



#### 7700/7800... SSK



#### 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
- 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
- future proof by using standardized LED-modules (Zhaga)

Article no.	Type	Power consumption [W]*	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [ca. kg] (without packaging)
-------------	------	------------------------	----------------------	--------------------------	-------------------------	-------------------------------------

#### 7700... SSK



77005 0001	7700 L100 SSK	70	9.220	132	A++	10,0
77005 0002	7700 L150 SSK	106	13.780	130	A++	10,4
77005 0003	7700 L210 SSK	140	17.770	127	A++	10,5

\* see notes

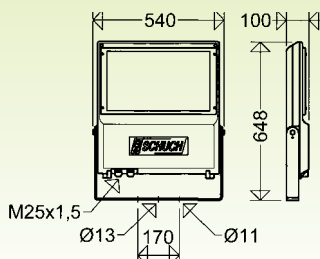
#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]*	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [ca. kg] (without packaging)
-------------	------	------------------------	----------------------	--------------------------	-------------------------	-------------------------------------

Series 7800... SSK



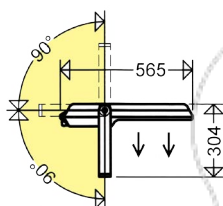
## 7800... SSK



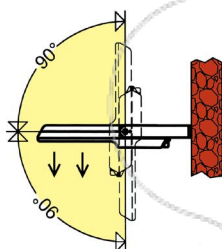
78005 0001	7800 L420 SSK	280	36.720	131	A++	18,0
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\* see notes

Swivel range



Standard Mounting



## Accessories / Spare Parts

Article no.	Type	
78001 9003	7700 SSK	spare polycarbonate protective cover without frame
78001 9002	7700/010	spare safety glas
78001 9004	7800 SSK	spare polycarbonate protective cover without frame
78001 9001	7800/010	spare safety glas
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.





## LED TECHNOLOGY

### 2009

First LED street light fittings were manufactured at the plant in Worms.

### 2011

Production of first die-cast aluminium street light fittings (Series 47) specially designed for LEDs.

### 2012-14

The Company's LED product range extended tremendously by manufacturing suspended LED 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“. A unique remote control system for energy-saving and on-demand control of public and industrial street lighting.

### 2018

With the FILOS VARIO the first LED outdoor light fitting with variable adjustable luminous flux is launched to the market.

One type only replaces the whole range of conventional lighting. Due to this big success, the pole light fitting 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 spotlight and spotlight range.

Product	Series	Page
<b>Technical outdoor light fittings</b>		
Series 48...	48...	104
Series 48... VARIO	48... VARIO	107
Series 47...	47...	109
• for pedestrian crossings or for object protection	... FUE	111
FILOS VARIO	42... VARIO	112-
with adjustable luminous flux		115
• die-cast aluminium housing	42 AL...	112
• with Highpower-LED	VARIO	
• Polyester housing with	42...	114
Midpower-LED	VARIO M	
Series 46/46AL...	46...	116
Series 43 L...	43 L...	118
<b>Rope supported</b>		
Series 59...	59...	120
Series 49...	49...	122
<b>Polyester Outdoor Light Fitting</b>		
Series 287...	287...	124
<b>Decorative outdoor light fittings</b>		
<b>Pole-Top light fittings</b>		
KONIC	544...	125
CUPINA	556...C	127
PLANEO	557... C	129
CILA	558... C	131
Series 541... C OR	541... C OR	133
Series 543... C	543... C	135
Series 553... C	553... C	137
<b>Pendant Luminaires</b>		
Series 564/565...	564/565...	139
<b>Plane Surface Floodlights</b>		
Series 48... A	48... A	141
Series 47... A	47... A	143
FOCO VARIO	7600... A	145
FOCO L	7700... A	147
FOCO XL	7800... A	149
Series 7571/7572/7573... A	7571/2/3... A	151
<b>Floodlights</b>		
FOCO VARIO	7600...	153
FOCO L	7700...	155
FOCO XL	7800...	157
AREALO	7850... SP	159
	7850... SPOV	160
<b>Pole arm carriers</b>		
		161
<b>Pole-top brackets</b>		
		162

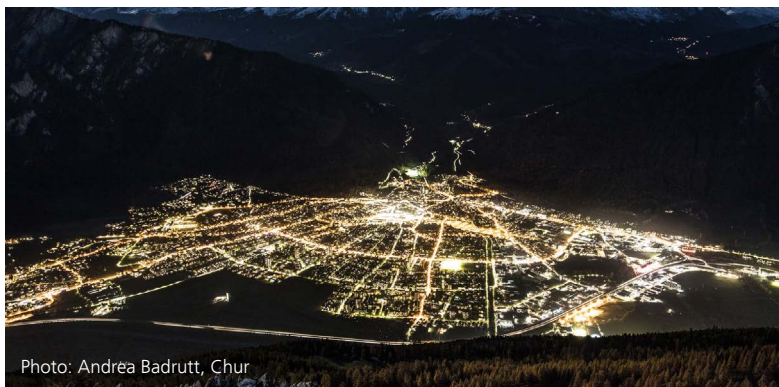
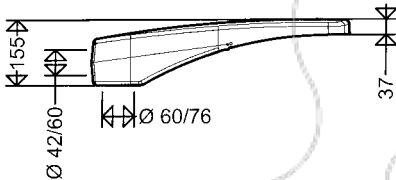
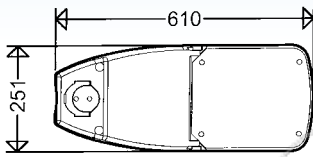


Photo: Andrea Badrutt, Chur

## LED Outdoor Light Fitting with Multi-Purpose Mounting System Series 48...



Now more efficient and more powerfull!



### Outstanding mounting advantage



### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

### 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 DB702N (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 IK08.

**Light distribution:** Asymmetric or asymmetric extremely wide beam (ABX).

**Connection:** With isolating plug connection with cable relief.

**Pole mounting device:** Die-cast aluminium, universal system for post top mounting Ø 60/76mm and side entry mounting Ø 42/60mm x 100mm.

**Inclination:** Post top mounting 0°, 5° and 10° (standard: 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000h$

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

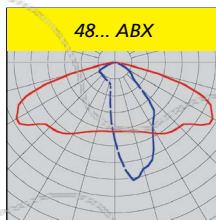
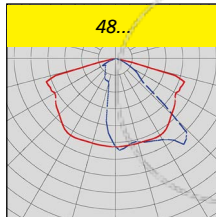
**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire lifetime of the LED-modules.

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000K, light colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class I (SKI)
- optics for cycle track (RWX)
- optics for M-classes (AB3)
- low glare optics (ABL)
- seawater-resistant version (SWP)

- for connection to group or central battery systems (ZB) or emergency mains respectively
- Ready for Light Management Systems (RFL) in protection class I (SKI)
- Light Management System (LIMAS) in protection class I (SKI)
- bird deterrence (BD)
- special painting in RAL colours



### 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
- integrated pressure compensation system for defined „Breathing“ of the fitting
- 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
- 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
- removable ECG upper part of the housing allows a comfortable maintenance, no painful overhead working.
- 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.
- 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. Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

Article no.	Type	Power consumption W[*] (CL: start of operating life)	Power consumption W[*] (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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## 48...



### asymmetrical wide beam

\*\* Replaces HME 80W  
Replaces HME 125W / HIE 70W

48001 0030	48 0801	9		1.350	150	A++	7,0
48001 0045	48 0802	13		1.850	142	A++	7,0
48001 0046	48 0803	18		2.500	139	A++	7,0
48001 0005	48 1601	17		2.610	154	A++	7,0
48001 0006	48 1602	25		3.550	142	A++	7,0
48001 0007	48 1603	35		4.800	137	A++	7,0
48001 0047	48 2401	26		4.000	154	A++	7,1
48001 0048	48 2402	37		5.430	147	A++	7,1
48001 0049	48 2403	53		7.330	138	A++	7,4
48001 0015	48 3201	34		5.250	154	A++	7,5
48001 0016	48 3202	50		7.120	142	A++	7,5
48001 0017	48 3203	70		9.610	137	A++	7,5
48001 0288	48 0801 CL	8	9	1.220	153	A++	7,0
48001 0056	48 0802 CL	12	13	1.670	139	A++	7,0
48001 0057	48 0803 CL	16	18	2.250	141	A++	7,0
48001 0105	48 1601 CL	15	17	2.350	157	A++	7,0
48001 0106	48 1602 CL	23	25	3.200	139	A++	7,0
48001 0107	48 1603 CL	32	35	4.320	135	A++	7,0
48001 0058	48 2401 CL	23	26	3.600	157	A++	7,1
48001 0059	48 2402 CL	33	37	4.890	148	A++	7,1
48001 0060	48 2403 CL	48	53	6.600	138	A++	7,4
48001 0115	48 3201 CL	31	34	4.730	153	A++	7,5
48001 0116	48 3202 CL	45	50	6.410	142	A++	7,5
48001 0117	48 3203 CL	63	70	8.650	137	A++	7,5

\* see notes

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

! Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).



Outdoor  
Light Fittings



Article no.	Type	Power consumption W[*] (CL: start of operating life)	Power consumption W[*] (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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## 48... ABX



Wind load  
area  
A = 0,05m²

### asymmetrical extremely wide beam (for large mast distances)

\*\*  
Replaces HME 80W  
Replaces HME 125W / HIE 70W

48001 0001	48 0801ABX	9		1.350	150	A++	7,0
48001 0011	48 0802ABX	13		1.850	142	A++	7,0
48001 0013	48 0803ABX	18		2.500	139	A++	7,0
48001 0002	48 1601ABX	17		2.610	154	A++	7,0
48001 0012	48 1602ABX	25		3.550	142	A++	7,0
48001 0014	48 1603ABX	35		4.800	137	A++	7,0
48001 0003	48 2401ABX	26		4.000	154	A++	7,1
48001 0004	48 2402ABX	37		5.430	147	A++	7,1
48001 0009	48 2403ABX	53		7.330	138	A++	7,4
48001 0079	48 3201ABX	34		5.250	154	A++	7,5
48001 0080	48 3202ABX	50		7.120	142	A++	7,5
48001 0081	48 3203ABX	70		9.610	137	A++	7,5
48001 0101	48 0801ABX CL	8	9	1.220	153	A++	7,0
48001 0111	48 0802ABX CL	12	13	1.670	139	A++	7,0
48001 0113	48 0803ABX CL	16	18	2.250	141	A++	7,0
48001 0102	48 1601ABX CL	15	17	2.350	157	A++	7,0
48001 0112	48 1602ABX CL	23	25	3.200	139	A++	7,0
48001 0114	48 1603ABX CL	32	35	4.320	135	A++	7,0
48001 0103	48 2401ABX CL	23	26	3.600	157	A++	7,1
48001 0166	48 2402ABX CL	33	37	4.890	148	A++	7,1
48001 0109	48 2403ABX CL	48	53	6.600	138	A++	7,4
48001 0082	48 3201ABX CL	31	34	4.730	153	A++	7,5
48001 0083	48 3202ABX CL	45	50	6.410	142	A++	7,5
48001 0084	48 3203ABX CL	63	70	8.650	137	A++	7,5

\* see notes

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

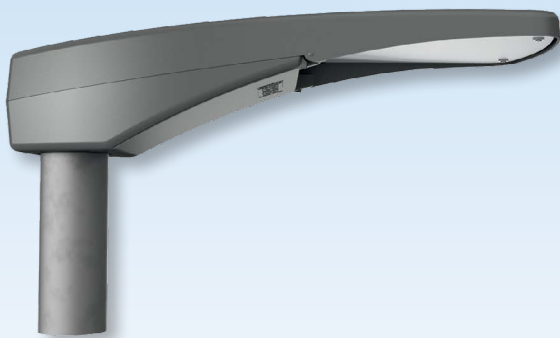
Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).



Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

## Accessories / Spare Parts

Article No.	Type	
90113 0002	HA 08	visor to avoid backwards luminous flux for 48 08..
90113 0003	HA 16	visor to avoid backwards luminous flux for 48 16..
90113 0004	HA 24	visor to avoid backwards luminous flux for 48 24..
90113 0005	HA 32	visor to avoid backwards luminous flux for 48 32..
48002 9000	48/010	flat safety glass cover



## 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 DB702N (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 IK08.

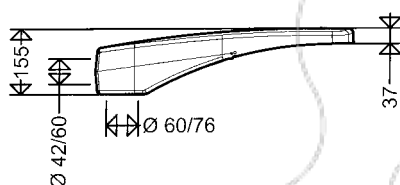
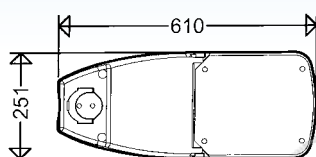
**Switch** for setting the luminous flux of the luminaire.

**Light distribution:** Asymmetric wide beam.

**Connection:** With isolating plug connection with cable relief.

**Mounting device:** Die-cast aluminium, universal system for post top mounting Ø 60/76mm and side entry mounting Ø 42/60mm x 100mm.

**Inclination:** Post top mounting 0°, 5° and 10° (standard: 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.



### Outstanding mounting advantage



### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

#### DALI interface (DIMD)

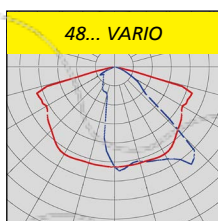
**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules.

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000K, light colour 730 (ca. 8% less light output)
- 1,800K, light colour 518 „Amber“ (ca. 38% less light output)
- protection class I (SKI)
- asymmetric beam (A), plane surface floodlight-optics
- optics asymmetric extremely wide beam (ABX)

- optics for cycle tracks (RWX)
- optics for M-classes (AB3)
- low glare optics (ABL)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- seawater resistant version (SWP)
- bird deterrence (BD)
- special painting in RAL colours



### Product highlights:

- simple, fast, tool-free setting of the luminous flux on site, by means of integrated switch, can be changed at any time
- reduction of the variety of versions, a single luminaire replaces various conventional luminaires
- highly economical storage due to standardisation
- integrated pressure compensation system for defined „Breathing“ of the fitting
- 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
- 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. **Dark-Sky requirements are fulfilled**
- future proof by using standardized LED-modules (Zhaga)

### Notes:

**Properties, limitations and details for controlling LED-light fittings:** See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article No.	Type	Power consumption [W]*	Luminous flux [lm] <sup>1) *</sup>	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] (without packing material)
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## 48... VARIO



The luminous flux is variably adjustable to values between 870lm and 2,500lm (Version L25), 2,610lm and 4,800lm (Version L50) or 5,250lm and 9,610lm (Version L100). Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

48001 0717	<b>48 L25 VARIO</b>	9	1.350	150	A++	HME 50, HST 35	7,2
		14	1.930	138	A++		
		18	2.500 <sup>2)</sup>	139	A++	HME 80, HST 50	
48001 0703	<b>48 L50 VARIO</b>	17	2.610	154	A++	HME 80, HST 50	7,5
		18	2.760 <sup>2)</sup>	153	A++	HME 125	
		22	3.230	147	A++	2 x HME 80, HST 70	
		35	4.800	137	A++	2 x HME 125	
48001 0750	<b>48 L100 VARIO</b>	34	5.250	154	A++	2 x HME 125	7,6
		47	6.810	145	A++	HST 100	
		54	7.740 <sup>2)</sup>	143	A++	HME 250	
		70	9.610	137	A++	HSE 150	

1) Examples of possible settings

2) Factory setting

\* see notes

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

**Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).**

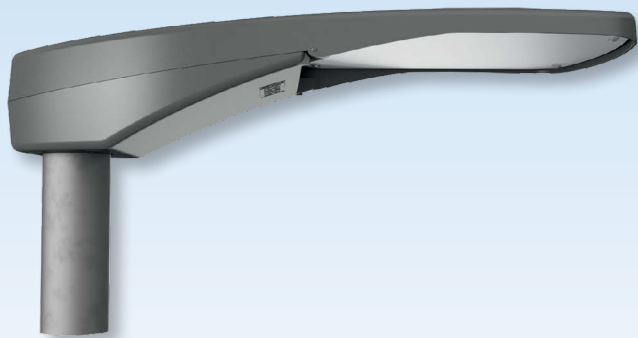


Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

## Accessories / Spare Parts

Article No.	Type	
90113 0002	<b>HA 08</b>	visor to avoid backwards luminous flux for 48 L25
90113 0003	<b>HA 16</b>	visor to avoid backwards luminous flux for 48 L50
90113 0005	<b>HA 32</b>	visor to avoid backwards luminous flux for 48 L100
48002 9000	<b>48/010</b>	flat safety glass cover





## LED Outdoor Light Fitting with Multi-Purpose Mounting System 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 DB702N (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:** Asymmetric wide or asymmetric extremely wide (ABX) beam.

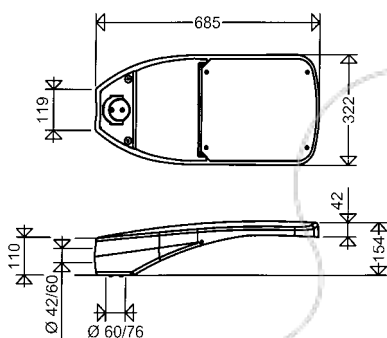
**Connection:** With isolating plug connection with cable relief

**Pole mounting device:** Die-cast aluminium, universal system for post top mounting Ø 60/76mm and side entry mounting Ø 42/60mm x 100mm.

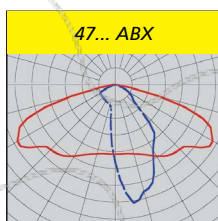
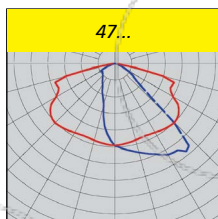
**Inclination:** Post top mounting 0°, 5° and 10° (standard: 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.



standardized by Deutsche Bahn AG



### Outstanding mounting advantage



### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_3 > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

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

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000K, light colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class I (SKI)
- optics for M-classes (AB3)
- low glare optics (ABL)
- for connection to group or central battery systems (ZB) or emergency mains
- respectively
- for illumination of ship locks
- seawater-resistant version (SWP)
- Ready for Light Management Systems (RFL) in protection class I (SKI)
- Light Management System (LIMAS) in protection class I (SKI)
- bird deterrence (BD)
- special painting in all RAL colours

### 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
- integrated pressure compensation system for defined „Breathing“ of the fitting
- 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
- 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 pole mounting system for post top and side entry mounting, no tools required
- adjustable inclination of the light fitting, no tools required
- easy replacement of the ECG due to removable upper part of the housing. No painful working overhead.
- 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.
- 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. Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption Wl* (CL: start of operating life)	Power consumption Wl* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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## 47...



### asymmetrical wide beam

47000 0005	47 4801	52		8.180	157	A++	10,2
47000 0010	47 4802	75		11.040	147	A++	10,2
47000 0047	47 4803	106		14.860	140	A++	10,2
47000 0007	47 6401	69		11.080	161	A++	10,3
47000 0011	47 6402	99		14.730	149	A++	10,3
47000 0048	47 6403	140		19.600	140	A++	10,3
47000 0065	47 4801 CL	47	52	7.360	157	A++	10,2
47000 0071	47 4802 CL	68	75	9.940	146	A++	10,2
47000 0066	47 4803 CL	95	106	13.370	141	A++	10,2
47000 0067	47 6401 CL	62	69	9.970	161	A++	10,3
47000 0072	47 6402 CL	89	99	13.260	149	A++	10,3
47000 0068	47 6403 CL	126	140	17.640	140	A++	10,3

## 47... ABX



### asymmetrical extremely wide beam

47000 0157	47 4801ABX	52		8.180	157	A++	10,2
47000 0158	47 4802ABX	75		11.040	147	A++	10,2
47000 0159	47 4803ABX	106		14.860	140	A++	10,2
47000 0160	47 6401ABX	69		11.080	161	A++	10,3
47000 0161	47 6402ABX	99		14.730	149	A++	10,3
47000 0166	47 6403ABX	140		19.600	140	A++	10,3
47000 0175	47 4801ABX CL	47	52	7.360	157	A++	10,2
47000 0176	47 4802ABX CL	68	75	9.940	146	A++	10,2
47000 0177	47 4803ABX CL	95	106	13.370	141	A++	10,2
47000 0178	47 6401ABX CL	62	69	9.970	161	A++	10,3
47000 0179	47 6402ABX CL	89	99	13.260	149	A++	10,3
47000 0180	47 6403ABX CL	126	140	17.640	140	A++	10,3

\* see notes

! Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).



Endurance tests in Dubai confirm excellent thermal management of Series 47 ..

#### Test conditions:

- housing painted white
- LED-fitting with maximum power consumption
- Maximum current supply
- Operation during daytime and at direct sunlight

#### Result:

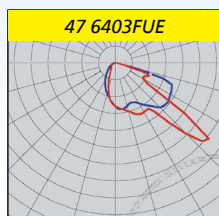
The light fitting performed at any time correctly and reliably.

Article no.	Type	Power consumption W[*] (CL: start of operating life)	Power consumption W[*] (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	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.

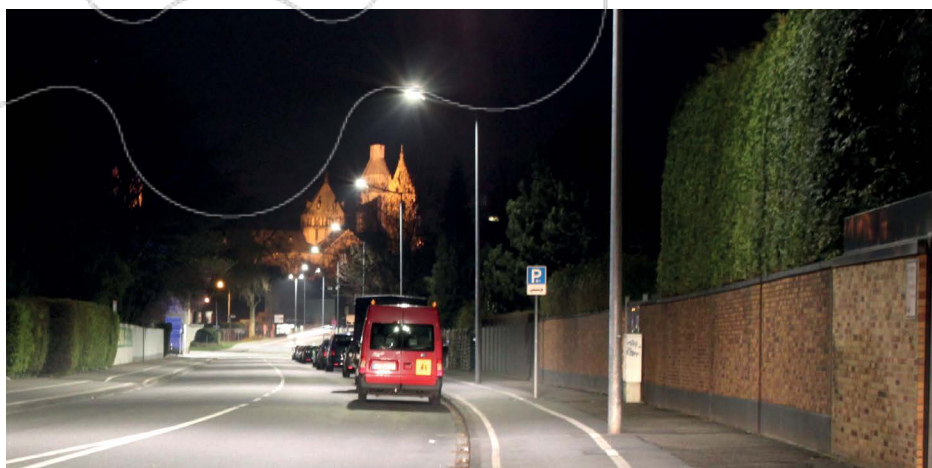
47000 0448	47 6403FUE	140	19.600	140	A++	10,3
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\* see notes

! 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)



## Accessories / Spare Parts

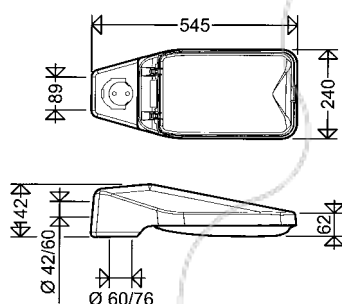
Article no.	Type	
90113 0006	HA 48	visor to avoid backwards luminous flux for 47 48..
90113 0007	HA 64	visor to avoid backwards luminous flux for 47 64..
470019002	47/010	flat safety glass

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.





**Die-cast aluminum housing!**



#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## FILOS LED-Outdoor Light Fitting with variable setting of the luminous flux Series 42 AL... 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, DB702N.

**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:** Asymmetric wide beam.

**Mounting system:** Die-cast aluminium, universal on pole end Ø of 60/76mm or for pole outreaches Ø of 42/60 x 100mm. Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

#### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000h$

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

#### Options:

On request also available with the following configurations (please mention in your enquiry or order):

##### 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%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with a second dimming step.

##### DAI interface (DIMD)

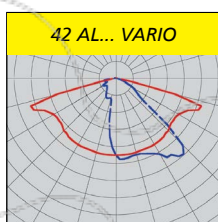
**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire life time of the LED-modules (L100)

Also, combinations of the functions are possible (CL LR / CL LA).

#### Options:

- 3,000K, light colour 730 (ca. 8% less light output)
- 1,800K, light colour 518 „Amber“ (ca. 38% less light output)
- protection class I (SKI)
- asymmetric beam (A), plane surface floodlight-optics
- Optics asymmetric extremely wide

- beam (ABX)
- optics for cycle track (RWX)
- seawater resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- special painting in RAL colours



#### Product highlights:

- reduction of the variety of versions, a single luminaire replaces various conventional luminaires
- 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 for defined „Breathing“ of the fitting
- 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
  - 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
- future proof by using standardized LED-modules (Zhaga)

Article No.	Type	Power consumption [W]*	Luminous flux [lm] <sup>1)</sup> *	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] (without packing material)
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## 42AL... VARIO



The luminous flux is variably adjustable to values between 1,360lm and 2,500lm (Version L25) or 2,740lm and 5,000lm (Version L50). Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

42003 0002	42AL L25 VARIO	9	1.360	151	A++	HME 50, HST 35	4,9
		14	1.930	138	A++		
		18	2.500 <sup>2)</sup>	139	A++	HME 80, HST 50	
42003 0001	42AL L50 VARIO	17	2.740	161	A++	HME 80, HST 50	4,9
		18	2.910 <sup>2)</sup>	162	A++	HME 125	
		22	3.390	154	A++	2 x HME 80, HST 70	
		35	5.000	143	A++	2 x HME 125	

1) Examples of possible settings

2) Factory setting

\* see notes

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

**Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).**

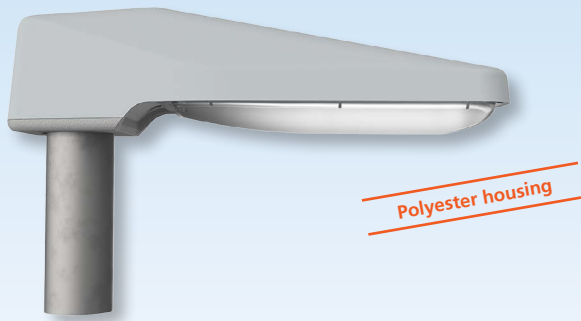


Outdoor  
Light Fittings

## Accessories / Spare Parts

Article no.	Type	
42001 9003	42000 PC	spare glass PC, UV stabilized, clear
90113 0002	HA 08	visor to avoid backwards luminous flux for 42AL L25
90113 0003	HA 16	visor to avoid backwards luminous flux for 42AL L50

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.



## 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 DB703 (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 acciden-

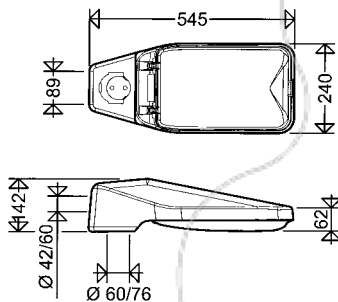
tal contact, isolating plug connection and cable retainer.

**Switch** for setting the luminous flux of the luminaire.

**Central closing:** Stainless steel.

**Light distribution:** Asymmetric wide beam.

**Mounting system:** Die-cast aluminium, universal on pole end Ø of 60/76mm or for pole outreaches Ø of 42/60 x 100mm. Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.



##### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 80$ , lifetime  $L_{80} > 100,000h$

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

##### Options:

On request also available with the following configurations (please mention in your enquiry or order):

##### 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.

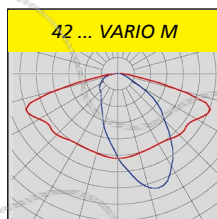
**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

##### DALI interface (DIMD)

**Constant luminous flux function (CL):** The set luminous flux is kept on a constant level over the entire lifetime of the LED-modules.

Also, combinations of the functions are possible (CL LR / CL LA).



##### Further Options:

- 3,000K, light colour 830 (ca. 3% lower luminous flux)

- 1,800K, light colour 518 „Amber“ (ca. 40% lower luminous flux). High power LED version only

- protection class II (SKII)

- optics for cycle track (RWX)

- asymmetric beam (A), plane surface floodlight-optics

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

- UV-protected and weather-resistant housing painted RAL 7035

##### Product highlights:

- reduction of the variety of versions, a single luminaire replaces various conventional luminaires
- 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.
  - 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
  - more than 50% weight reduction compared to luminaires with die-cast aluminium housing
- quick changeover due to easily replacable gear-tray with disconnecter
- future proof by using standardized LED-modules (Zhaga)

##### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).








 Wind load area  
 $A = 0,06\text{m}^2$

The luminous flux is variably adjustable to values between 1,400lm and 2,680lm (**Version L25**) or 2,830lm and 5,350lm (**Version L50**). Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

- 1) Examples of possible settings
- 2) Factory setting

\* see notes

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

**Applications:**

For mounting outdoor light fittings on flat walls and corners of buildings.

**Design:**

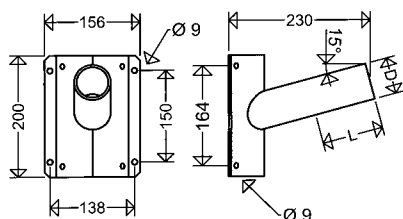
Aluminium plate 4 mm thick, powder coated grey (RAL

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 or DB colours

Article no.	Type	D	L	Weight ca. [kg]
48700 0001	<b>4870</b>	42	100	0,6
48700 0503	<b>4870 DB703</b>	42	100	0,6
48700 0002	<b>4871</b>	60	100	0,7
48700 0504	<b>4871 DB703</b>	60	100	0,7



Article no.	Type	
42001 9003	<b>42000 PC</b>	spare glass PC, UV stabilized, clear

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

## Modern LED-Outdoor Light Fitting with Multi-Purpose Mounting System Series 46...

### Applications:

Residential streets, by-roads and thoroughfares, walkways and bicycle lanes, traffic-calmed zones, factory streets in industrial plants etc.

### Design:

**Housing:** Glass fibre reinforced polyester resin with UV resistant coating, integrated pressure compensation system.

**Diffuser:** Flat safety glass, hinged and detachable. Profile gasket, UV stabilized, hinged and detachable.

**Fasteners:** Stainless steel.

**Gear tray:** Aluminium, with LED module,

optical and all electrical components, in compact unit connected with aluminium frame and glass pane, hinged and detachable, isolating plug connection and cable retainer.

**Light distribution:** Asymmetric wide beam.

**Mounting system:** Universal pole mounting system made from die-cast aluminium for pole top and side entry mounting. Pole end Ø of 60mm and 76mm (inclination: 10°).

**Supporting section:** Ø42 x 100mm or 60 x 100mm.

with UV resistant coating

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90}$  100,000h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

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

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

– 3,000 K, light-colour 730 (ca. 8% lower luminous flux)

– 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)

– protection class I (SKI)

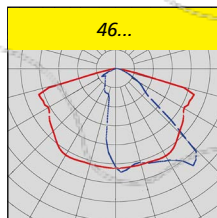
– asymmetric beam (A), plane surface floodlight-optics

– Optics asymmetrical extremely wide beam (ABX)

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

– optics for cycle track (RWX)

– aluminium housing (AL)



### Product highlights:

- 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 for well defined „breathing“, to avoid the formation of condensation water inside the light fitting
- **tool free** turnable pole mounting system for quick post top or side entry mounting
- one hinged and detachable compact unit, consisting of glass, aluminum frame, 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
- high energy saving compared to existing installation with HPMV lamps
- 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. Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article No.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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46...



#### asymmetrical extremely wide beam

46004 0001	46 1601	17		2.620	154	A++	6,8
46004 0004	46 1602	25		3.560	142	A++	6,8
46004 0002	46 1603	35		4.800	137	A++	6,8
46004 0005	46 3201	34		5.360	158	A++	6,9
46004 0003	46 3202	50		7.180	144	A++	6,9
46004 0031	46 1601 CL	15	17	2.360	157	A++	6,8
46004 0034	46 1602 CL	23	25	3.200	139	A++	6,8
46004 0032	46 1603 CL	32	35	4.320	135	A++	6,8
46004 0035	46 3201 CL	31	34	4.820	155	A++	6,9
46004 0033	46 3202 CL	45	50	6.460	144	A++	6,9

\* see notes



Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).



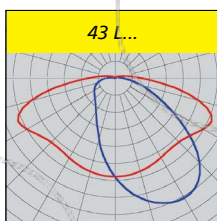
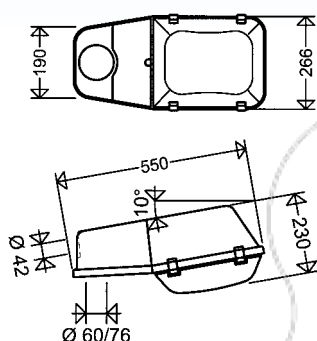
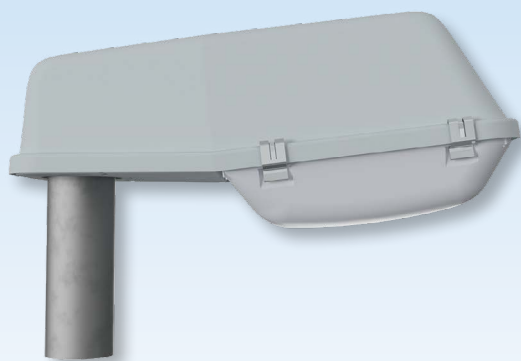
Outdoor  
Light Fittings

#### Accessories / Spare Parts

Article no.	Type	
46001 9002	46/010	flat glass pane with aluminium frame
90113 0003	HA 16	visor to avoid backwards luminous flux for 46 16.
90113 0005	HA 32	visor to avoid backwards luminous flux for 46 32.

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.





## LED-Outdoor Light Fitting with Universal Mounting System Series 43... L

### Applications:

Residential-, side streets und through traffic streets, footpaths and cycle tracks, traffic-calmed areas, car parks, gateways etc..

### Design :

**Housing:** Glass fibre reinforced polyester resin.

**Diffuser:** PMMA frosted, hingeable and detachable.

**Closure:** Stainless steel latches.

**Gear tray/heat sink:** Aluminium, with

LED modul, optics and all electrical components in compact unit protected against accidental contact, isolating plug connection and cable retainer.

**Light distribution:** Asymmetric wide beam.

**Mounting system:** Universal mounting on pole end Ø of 60mm and 76mm (inclination of the luminaire: 10°) or for pole outreaches with supporting section of 42Ø x 100mm.

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_g > 80$ , lifetime  $L_{80} > 100,000h$

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMD)

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

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000K, light colour 830 (ca. 3% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 40% lower luminous flux). High power LED version only
- protection class II (SKII)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- pole outreaches Ø 60 x 100mm
- UV-protected painted housing

### Product highlights:

- ECG with high surge voltage resistance reliable due to overload and short circuit protection
- protection of the LEDs against mechanical and electrostatic damage due to sandwich-design of gear tray and cover
- frosted cover for glare limitation
- 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
  - gear tray hingeable and detachable
  - integrated universal pole mounting system, no additional flanges or adapter pieces required
  - very low weight
- quick changeover due to easily replacable gear-tray with disconnecter
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article No.	Type	Power consumption [W]*	Luminous flux [lm]*	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] (without packing material)
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### 43 L...



43006 0001	<b>43 L30</b>	17	2.860	168	A++	HME 80 / HST 50	4,4
43006 0002	<b>43 L40</b>	25	3.950	158	A++	HME 125 / HST 70	4,4
43006 0003	<b>43 L50</b>	35	5.400	154	A++	2 x HME 125	4,4

\* see notes

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

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



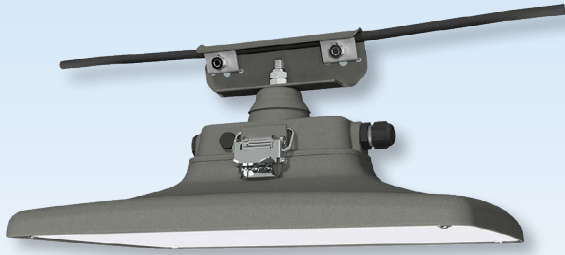
Outdoor  
Light Fittings

### Accessories / Spare Parts

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Article no.	Type	
43001 9002	<b>43002 C</b>	spare glass PMMA, frosted

## 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 DB702N (mica-iron paint, grey). **Lower section** with LED-Module, optics, glass cover and ECG, toolless 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, toolless 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:** Zhaga compliant, 4,000K,  $R_g > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMD)

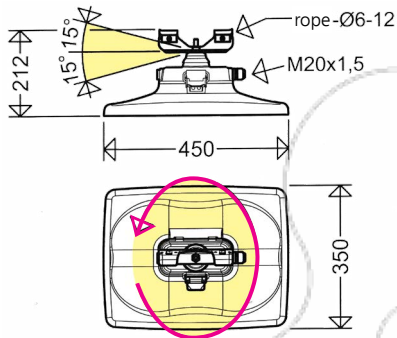
#### 1-10V (DIMA)

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

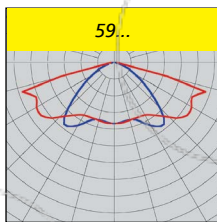
Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000K, light colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class II (SKII), with additional ESD protection
- seawater-resistant version (SWP)
- Light Management System (LIMAS) in protection class I (SKI)
- 3-point supporting bracket (49/3P)
- special painting in RAL or DB colours



### 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 for defined „Breathing“ avoids condensation water within the fitting
- time- and cost-saving mounting in 2 steps due to toolless 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
- toolless 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. „Dark-Sky“ requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article No.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]*	Power efficiency class	Weight [kg] (without packing material)
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## 59...



59001 0021	<b>59 1601</b>	17		2.900	171	A++	6,6
59001 0022	<b>59 1602</b>	25		3.940	158	A++	6,6
59001 0023	<b>59 1603</b>	35		5.340	153	A++	6,6
59001 0001	<b>59 3201</b>	34		5.580	164	A++	7,0
59001 0002	<b>59 3202</b>	50		7.570	151	A++	7,0
59001 0003	<b>59 3203</b>	70		10.230	146	A++	7,0
59001 0024	<b>59 1601 CL</b>	15	17	2.610	174	A++	6,6
59001 0025	<b>59 1602 CL</b>	23	25	3.550	154	A++	6,6
59001 0026	<b>59 1603 CL</b>	32	35	4.810	150	A++	6,6
59001 0004	<b>59 3201 CL</b>	31	34	5.020	162	A++	7,0
59001 0005	<b>59 3202 CL</b>	45	50	6.810	151	A++	7,0
59001 0006	<b>59 3203 CL</b>	63	70	9.210	146	A++	7,0

\* see notes

**!** Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).

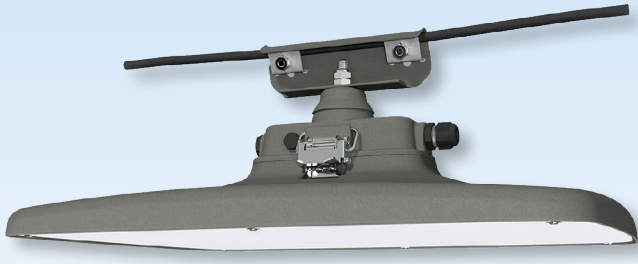


3-point mounting

## Accessories / Spare Parts

Article no.	Type	
49001 9003	<b>59/010</b>	flat safety glass
49001 9002	<b>49/3P</b>	3-point mounting

## Rope Supported LED Light Fitting Series 49 ...



### Applications:

Through, collecting and main roads etc.

### Design:

**Housing:** Die-cast aluminium, 2-parts, powder coated in DB702N (mica-iron paint, grey). **Lower section** with LED-Module, optics, glass cover and ECG, toolless 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, toolless 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:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

#### DALI interface (DIMD)

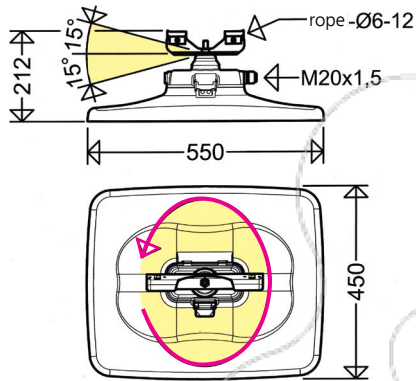
#### 1-10V (DIMA)

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

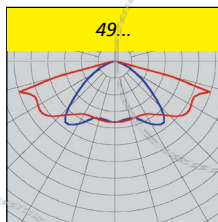
Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000K, light colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class II (SKII), with additional ESD protection
- seawater-resistant version (SWP)
- Light Management System (LIMAS) in protection class I (SKI)
- 3-point supporting bracket (49/3P)
- special painting in RAL or DB colours



### 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 for defined „Breathing“ avoids condensation water within the fitting
- time- and cost-saving mounting in 2 steps due to toolless 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
- toolless 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. „Dark-Sky“ requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W] *	Energy efficiency class	Weight [kg] (without packing material)
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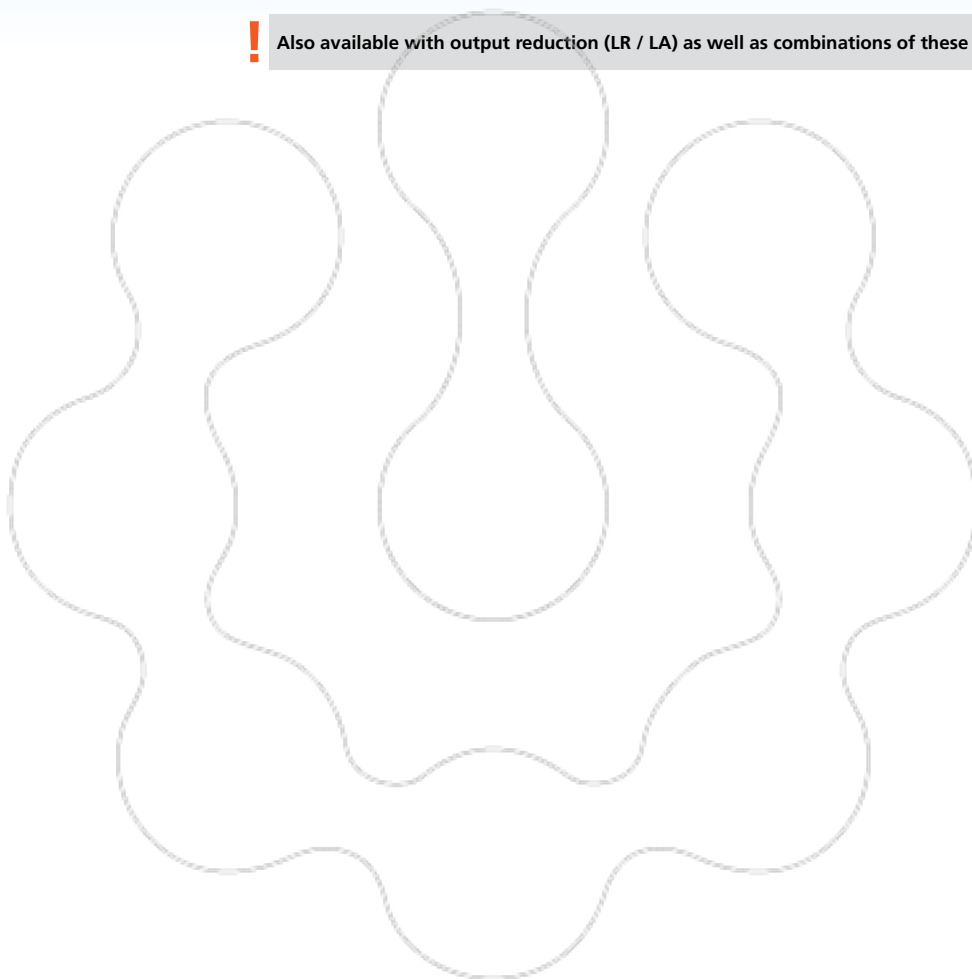
## 49...



49000 0054	<b>49 6401</b>	69		11.150	162	A++	11,8
49000 0055	<b>49 6402</b>	99		15.070	152	A++	11,8
49000 0056	<b>49 6403</b>	140		20.300	145	A++	11,8
49000 0074	<b>49 6401 CL</b>	62	69	10.040	162	A++	11,8
49000 0075	<b>49 6402 CL</b>	89	99	13.560	152	A++	11,8
49000 0076	<b>49 6403 CL</b>	126	140	18.270	145	A++	11,8

\* see notes

! Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).



3-point mounting

## Accessories / Spare Parts

Article no.	Type	
49001 9001	<b>49/010</b>	flat safety glass
49001 9002	<b>49/3P</b>	3-point mounting



## LED-Polyester Outdoor Light Fitting Series 287...

### Applications:

Side and main streets, through roads etc.

### Design:

**Housing:** Glass fibre reinforced polyester resin.

**Cover:** Clear, pearled acrylic glass (PMMA), hinged and detachable, silicon gasket

**Closure:** Internal central closing device, latches and operating lever made from

stainless steel.

**Reflector:** White sheet steel carrying all electrical components with additional elements for glare limitation, hinged and detachable, plug-type device to the mains connection terminal in the housing.

**Mounting system:** On outreach end sections of 42 x 250 (287 06L) 42 x 400 (287 12L).

### Electrical design:

**LED module:** Zhaga compliant, neutral white, 4,000K,  $R_a > 80$ , lifetime  $L_{80} > 60,000h$ .  
**ECG:** 220-240V, 50-60Hz, Surge voltage resistance 10kV, overload and short circuit protection.

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

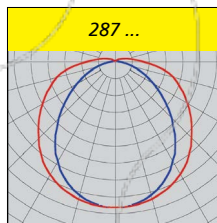
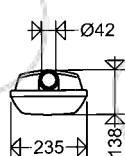
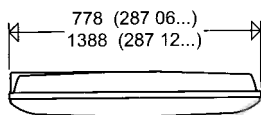
#### DALI interface (DIMD)

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

Also, combinations of the functions are possible (CL LR / CL LA).

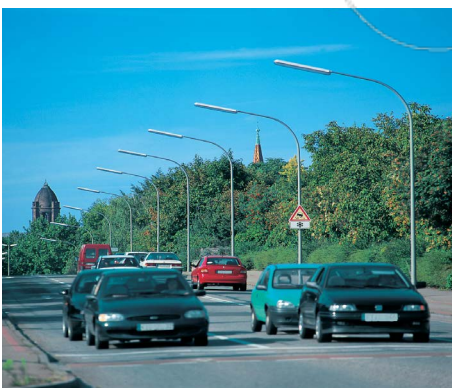
### Further Options:

– 3,000K, light colour 830 (ca. 4% lower luminous flux) – protection class II (SKII)



### Product highlights:

- ECG with high surge voltage resistance protection reliable due to overload and short circuit protection
- homogeneous illumination by using frosted diffusers, no particular light points visible, comfortable perception of light, brilliant glare limitation
- toolless central locking system
- fast to maintain or to change components
- future proof by using standardized LED-modules (Zhaga)



Article No.	Type	Power consumption [W]*	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packingmaterial)
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## 287...



28703 0001	287 06L42	30	4.410	147	A++	5,5
28703 0004	287 12L42	30	4.410	147	A++	8,0
28703 0007	287 12L60	45	6.500	144	A++	8,0

\* see notes

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

### Notes:

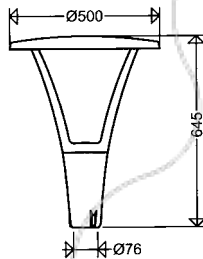
**Limitations for LED-light fittings:** See chapter „Use of LED lighting in corrosive atmospheres“ in the Technical Appendix.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Accessories / Spare Parts

Article no.	Type	
28701 9003	28706L	spare glass for 287 06L..
28701 9004	28712L	spare glass for 287 12L..

## KONIC LED Pole-Top Light Fitting Series 544...



### Applications:

#### 544.. ABX and ... 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 DB702N (mica-iron paint, grey).

**Lower section** with electrical components, cable entry, plug-type device and cable

retainer for connection cable.

**Tie bars** with cable feed-through.

**Upper part** with LED-modules and optics.

**Cover:** Acrylic glass (PMMA), frosted.

**Light distribution:** Asymmetrical extremely wide beam (ABX), asymmetrical wide beam (AB) 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).

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMD)

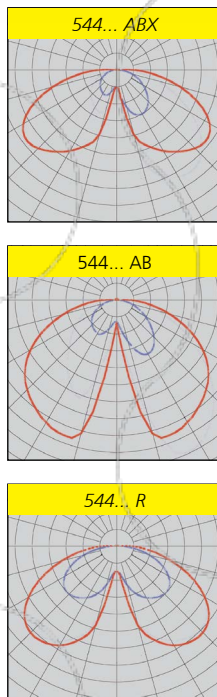
#### 1-10V (DIMA)

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

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000 K, light-colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class I (SKI)
- optics for cycle track (RWX)
- seawater-resistant version (SWP)
- with increased luminous flux
- special coating in RAL colours



### 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
- **future proof** by using standardized LED-modules (Zhaga)

### Notes:

**Properties, limitations and details for controlling LED-light fittings:** See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]*	Luminous flux [lm]*	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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## 544... ABX



### asymmetrical extremely wide beam

54400 0001	544 0801ABX	9	1.250	139	A++	9,5
54400 0002	544 0802ABX	13	1.710	132	A++	9,5
54400 0003	544 0803ABX	18	2.310	128	A++	9,5
54400 0004	544 1601ABX	17	2.490	146	A++	9,6
54400 0005	544 1602ABX	25	3.390	136	A++	9,6
54400 0006	544 1603ABX	35	4.590	131	A++	9,6
54400 0007	544 2401ABX	26	3.750	144	A++	9,7
54400 0008	544 2402ABX	37	5.080	137	A++	9,7
54400 0009	544 2403ABX	53	6.860	129	A++	9,7

## 544... AB



### asymmetrical wide beam distribution

54400 0104	544 1601AB	17	2.490	146	A++	9,6
54400 0105	544 1602AB	25	3.390	136	A++	9,6
54400 0106	544 1603AB	35	4.590	131	A++	9,6
54400 0107	544 3201AB	34	4.980	146	A++	9,8
54400 0108	544 3202AB	50	6.750	135	A++	9,8

## 544... R



### symmetrical circular beam

54400 0201	544 0801R	9	1.250	139	A++	9,6
54400 0202	544 0802R	13	1.710	132	A++	9,6
54400 0203	544 0803R	18	2.310	128	A++	9,6
54400 0204	544 1601R	17	2.490	146	A++	9,7
54400 0205	544 1602R	25	3.390	136	A++	9,7
54400 0206	544 1603R	35	4.590	131	A++	9,7
54400 0207	544 2401R	26	3.750	144	A++	9,7
54400 0208	544 2402R	37	5.080	137	A++	9,7
54400 0209	544 2403R	53	6.860	129	A++	9,7

\*see notes

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	
90544 9000	10044	spare glass PMMA frosted
90113 0002	HA 08	visor to avoid backwards luminous flux for 544 08..
90113 0003	HA 16	visor to avoid backwards luminous flux for 544 16..
90113 0004	HA 24	visor to avoid backwards luminous flux for 544 24..
90113 0005	HA 32	visor to avoid backwards luminous flux for 544 32..





## CUPINA Pole-Top LED-Light Fitting Series 556... C

### Applications:

#### 556... ABX:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

#### 556... R:

Promenades, public parks, pedestrian areas etc.

### Design :

Roof and supporting section: Aluminium, powder-coated DB702N (mica-iron paint, grey).

Cover: PMMA, clear, cylindrical.

Electrical kit: Wired ready for installation,

plug-type device to the mains connection terminal, cable retainer for connection cable, with LED module, frosted cover, heat sink and ECG.

Light distribution: Asymmetrical extremely wide beam (ABX) or circular beam (R).

Optics and anodized pure aluminium louver stack, frosted cover for glare limitation.

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. + (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

### Electrical design:

LED module: Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

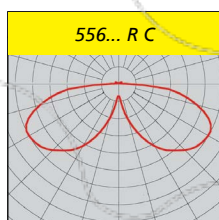
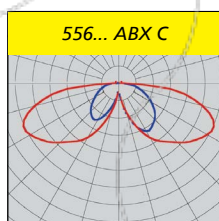
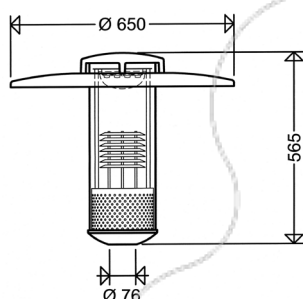
**Without control phase (LA):** Autonomic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

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

Also, combinations of the functions are possible (CL LR / CL LA).



### Further Options:

- 3,000K, light colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class I (SKI)
- Light Management System (LIMAS) in protection class I (SKI)

- seawater-resistant version (SWP)
- without louver stack (OR)
- without frosted cover (appr. 10% higher luminous flux)
- special coating in other RAL- and DB-colours



without frosted cover



without louver stack  
(C OR)



without frosted cover/louver  
stack (OR)

### Product highlights:

- ECG with high surge voltage resistance, reliable due to overload and short circuit protection
- optimal light distribution due to direct beam LED with high efficient optics
- excellent glare limitation due to frosted cover of the LED module
- 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 maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]*	Energy efficiency class	Weight [kg] (without packing material)
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## 556... C



Wind load  
area  
A = 0,13m<sup>2</sup>

### asymmetrical extremely wide beam

11556 0060	556 0801ABX C	9		1.150	128	A++	6,7
11556 0061	556 0802ABX C	13		1.560	120	A++	6,7
11556 0062	556 0803ABX C	18		2.100	117	A++	6,7
11556 0063	556 1601ABX C	17		2.300	135	A++	6,8
11556 0064	556 1602ABX C	25		3.070	123	A++	6,8
11556 0066	556 0801ABX C CL	8	9	1.040	130	A++	6,7
11556 0067	556 0802ABX C CL	12	13	1.400	117	A++	6,7
11556 0068	556 0803ABX C CL	16	18	1.890	118	A++	6,7
11556 0069	556 1601ABX C CL	15	17	2.070	138	A++	6,8
11556 0070	556 1602ABX C CL	23	25	2.760	120	A++	6,8

### symmetrical circular beam

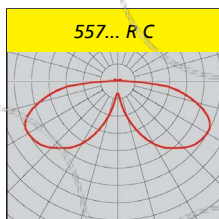
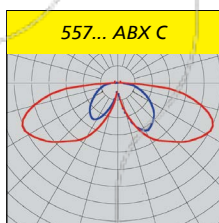
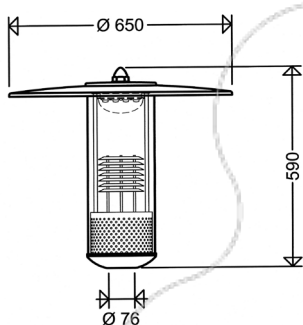
11556 0078	556 0801R C	9		1.150	128	A++	6,7
11556 0079	556 0802R C	13		1.560	120	A++	6,7
11556 0080	556 0803R C	18		2.100	117	A++	6,7
11556 0081	556 1601R C	17		2.300	135	A++	6,8
11556 0082	556 1602R C	25		3.070	123	A++	6,8
11556 0084	556 0801R C CL	8	9	1.040	130	A++	6,7
11556 0085	556 0802R C CL	12	13	1.400	117	A++	6,7
11556 0086	556 0803R C CL	16	18	1.890	118	A++	6,7
11556 0087	556 1601R C CL	15	17	2.070	138	A++	6,8
11556 0088	556 1602R C CL	23	25	2.760	120	A++	6,8

\* see notes

! Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).

## Accessories / Spare Parts

Article no.	Type	
10051 9000	10051	clear PMMA glass cover, cylindrical.
10041 9001	10041 C	frosted cover for glare limitation
90113 0002	HA 08	visor to avoid backwards luminous flux for 556 08.. C
90113 0003	HA 16	visor to avoid backwards luminous flux for 556 16.. C
90116 9003	RS 543 LED	louver stack, aluminium, LED design for series 543/553/556...
90126 0001	RZ 1 schwarz	adapter for pole-top Ø 60mm



without frosted cover



without louver stack  
(C OR)



without frosted cover/louver  
stack (OR)

## PLANE0 Pole-Top LED-Light Fitting Series 557... C

### Applications:

#### 557... ABX:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

#### 557... R:

Promenades, public parks, pedestrian areas etc.

### Design :

**Roof and supporting section:** Aluminium, powder-coated DB702N (mica-iron paint, grey).

**Cover:** PMMA, clear, cylindrical.

**Electrical kit:** Wired ready for installation,

plug-type device to the mains connection terminal, cable retainer for connection cable, with LED module, frosted cover, heat sink and ECG.

**Light distribution:** Asymmetrical extremely wide beam (ABX) or circular beam (R). LED optics and anodized pure aluminium louver stack.

**Mounting system:** 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. + (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000h$

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

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

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000K, light colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class I (SKI)
- Light Management System (LIMAS) in protection class I (SKI)

- seawater-resistant version (SWP)
- without frosted cover (appr. 10% higher luminous flux)
- without louver stack (OR)
- special coating in other RAL- and DB-colours

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

### Product highlights:

- ECG with high surge voltage resistance, reliable due to overload and short circuit protection
- optimal light distribution due to direct beam LED with high efficient optics
- excellent glare limitation due to frosted cover of the LED module
- 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 maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- future proof by using standardized LED-modules (Zhaga)



Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]*	Energy efficiency class	Weight [kg] (without packingmaterial)
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## 557... C



Wind load  
area  
A = 0,13m<sup>2</sup>

### asymmetrical extremely wide beam

55700 0040	557 0801ABX C	9		1.150	128	A++	5,9
55700 0041	557 0802ABX C	13		1.560	120	A++	5,9
55700 0042	557 0803ABX C	18		2.100	117	A++	5,9
55700 0043	557 1601ABX C	17		2.300	135	A++	6,0
55700 0044	557 1602ABX C	25		3.070	123	A++	6,0
55700 0017	557 0801ABX C CL	8	9	1.040	130	A++	5,9
55700 0047	557 0802ABX C CL	12	13	1.400	117	A++	5,9
55700 0048	557 0803ABX C CL	16	18	1.890	118	A++	5,9
55700 0049	557 1601ABX C CL	15	17	2.070	138	A++	6,0
55700 0050	557 1602ABX C CL	23	25	2.760	120	A++	6,0

### symmetrical circular beam

55700 0058	557 0801R C	9		1.150	128	A++	5,9
55700 0059	557 0802R C	13		1.560	120	A++	5,9
55700 0060	557 0803R C	18		2.100	117	A++	5,9
55700 0061	557 1601R C	17		2.300	135	A++	6,0
55700 0062	557 1602R C	25		3.070	123	A++	6,0
55700 0018	557 0801R C CL	8	9	1.040	130	A++	5,9
55700 0065	557 0802R C CL	12	13	1.400	117	A++	5,9
55700 0066	557 0803R C CL	16	18	1.890	118	A++	5,9
55700 0067	557 1601R C CL	15	17	2.070	138	A++	6,0
55700 0068	557 1602R C CL	23	25	2.760	120	A++	6,0

\* see notes

! Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).

## Accessories / Spare Parts

Article no.	Type	
10051 9000	10051	clear PMMA glass cover, cylindrical.
10041 9001	10041 C	frosted cover for glare limitation
90113 0002	HA 08	visor to avoid backwards luminous flux for 557 08.. C
90113 0003	HA 16	visor to avoid backwards luminous flux for 557 16.. C
90116 9003	RS 543 LED	louver stack, aluminium, LED design for series 543/553/556/557...
90126 0001	RZ 1 schwarz	adapter for pole-top Ø 60mm

NEW

## CILA Pole-Top LED-Light Fitting Series 558... C

### Applications:

#### 558... ABX:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

#### 558... R:

Promenades, public parks, pedestrian areas etc.

### Design :

Roof and supporting section: Aluminium, powder-coated DB702N (mica-iron paint, grey).

Cover: PMMA, clear, cylindrical.

Electrical kit: Wired ready for installation,

plug-type device to the mains connection terminal, cable retainer for connection cable, with LED module, frosted cover, heat sink and ECG.

Light distribution: Asymmetrical extremely wide beam (ABX) or circular beam (R).

Optics and anodized pure aluminium louver stack, frosted cover for glare limitation.

Mounting system: 3 non-corrosive steel locking screws serve for fixation on straight poles Ø 76 mm. + (RZ 1) for pole end Ø of 60 mm (see accessories / spare parts).

### Electrical design:

LED module: Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

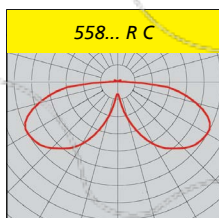
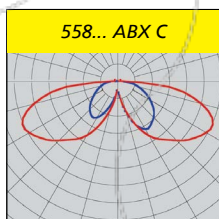
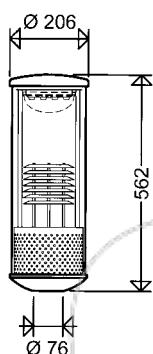
Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire lifetime of the LED-modules.

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000K, light colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class I (SKI)
- Light Management System (LIMAS) in protection class I (SKI)

- seawater-resistant version (SWP)
- without louver stack (OR)
- without frosted cover (appr. 10% higher luminous flux)
- special coating in other RAL- and DB-colours



without frosted cover



without louver stack  
(C OR)



without frosted cover/louver  
stack (OR)

### Product highlights:

- ECG with high surge voltage resistance, reliable due to overload and short circuit protection
- optimal light distribution due to direct beam LED with high efficient optics
- excellent glare limitation due to frosted cover of the LED module
- 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 maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]*	Energy efficiency class	Weight [kg] (without packing material)
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## 558... C



### asymmetrical extremely wide beam

55800 0001	558 0801ABX C	9		1.150	128	A++	4,7
55800 0002	558 0802ABX C	13		1.560	120	A++	4,7
55800 0003	558 0803ABX C	18		2.100	117	A++	4,7
55800 0013	558 1601ABX C	17		2.300	135	A++	4,8
55800 0014	558 1602ABX C	25		3.070	123	A++	4,8
55800 0004	558 0801ABX C CL	8	9	1.040	130	A++	4,7
55800 0005	558 0802ABX C CL	12	13	1.400	117	A++	4,7
55800 0006	558 0803ABX C CL	16	18	1.890	118	A++	4,7
55800 0015	558 1601ABX C CL	15	17	2.070	138	A++	4,8
55800 0016	558 1602ABX C CL	23	25	2.760	120	A++	4,8

### symmetrical circular beam

55800 0007	558 0801R C	9		1.150	128	A++	4,7
55800 0008	558 0802R C	13		1.560	120	A++	4,7
55800 0009	558 0803R C	18		2.100	117	A++	4,7
55800 0017	558 1601R C	17		2.300	135	A++	4,8
55800 0018	558 1602R C	25		3.070	123	A++	4,8
55800 0010	558 0801R C CL	8	9	1.040	130	A++	4,7
55800 0011	558 0802R C CL	12	13	1.400	117	A++	4,7
55800 0012	558 0803R C CL	16	18	1.890	118	A++	4,7
55800 0019	558 1601R C CL	15	17	2.070	138	A++	4,8
55800 0020	558 1602R C CL	23	25	2.760	120	A++	4,8

\* see notes

! Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).

## Accessories / Spare Parts

Article no.	Type	
10051 9000	10051	clear PMMA glass cover, cylindrical.
10041 9001	10041 C	frosted cover for glare limitation
90113 0002	HA 08	visor to avoid backwards luminous flux for 558 08.. C
90113 0003	HA 16	visor to avoid backwards luminous flux for 558 16.. C
90116 9003	RS 543 LED	louver stack, aluminium, LED design for series 543/553/556/558...
90126 0001	RZ 1 schwarz	adapter for pole-top Ø 60mm



## LED Pole-Top Light Fitting Series 541... C OR

### Applications:

#### 541... /ABX:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

#### 541... /R:

Promenades, public parks, pedestrian areas etc.

### Design:

#### Supporting section, roof and top cover:

Aluminium powder coated in jet black (RAL 9005).

Glass cover: Clear, acrylic glass (PMMA).

Electrical kit:

Wired ready for installation, plug-type device to the mains connection terminal, cable retainer for connection cable, with LED module, heat sink and ECG.

Light distribution: Asymmetrical extremely wide beam (ABX) or symmetrical circular beam (R). Frosted cover for glare limitation.

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).

### Electrical design:

LED module: Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Automatic dimming by integrated timer.

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 step.

#### DALI interface (DIMD)

#### 1-10 V (DIMA)

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

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

– 3,000K, light colour 730 (ca. 8% lower luminous flux)

– 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)

– protection class I (SKI)

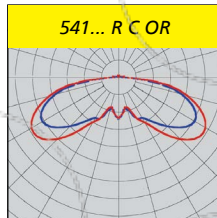
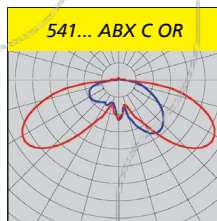
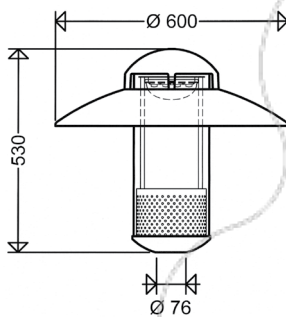
– Light Management System (LIMAS) in protection class I (SKI)

– seawater-resistant version (SWP)

– without frosted cover for glare limitation (appr. 7% higher luminous flux)

– with louver stack (appr. 8% lower luminous flux)

– special coating in RAL colours



without frosted cover



without louver stack  
(C OR)



without frosted cover/louver  
stack (OR)

### Product highlights:

- ECG with high surge voltage resistance, reliable due to overload and short circuit protection
- optimal light distribution due to direct beam LED with high efficient optics
- excellent glare limitation due to frosted cover of the LED module
- 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 maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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## 541... C OR



### asymmetrical extremely wide beam

11541 0102	541 0801ABX C OR	9		1.150	128	A++	7,1
11541 0103	541 0802ABX C OR	13		1.560	120	A++	7,1
11541 0104	541 0803ABX C OR	18		2.100	117	A++	7,1
11541 0105	541 1601ABX C OR	17		2.300	135	A++	7,2
11541 0106	541 1602ABX C OR	25		3.070	123	A++	7,2
11541 0108	541 0801ABX C OR CL	8	9	1.040	130	A++	7,1
11541 0109	541 0802ABX C OR CL	12	13	1.400	117	A++	7,1
11541 0110	541 0803ABX C OR CL	16	18	1.890	118	A++	7,1
11541 0111	541 1601ABX C OR CL	15	17	2.070	138	A++	7,2
11541 0112	541 1602ABX C OR CL	23	25	2.760	120	A++	7,2

### symmetrical circular beam

11541 0120	541 0801R C OR	9		1.150	128	A++	7,1
11541 0121	541 0802R C OR	13		1.560	120	A++	7,1
11541 0122	541 0803R C OR	18		2.100	117	A++	7,1
11541 0123	541 1601R C OR	17		2.300	135	A++	7,2
11541 0124	541 1602R C OR	25		3.070	123	A++	7,2
11541 0126	541 0801R C OR CL	8	9	1.040	130	A++	7,1
11541 0127	541 0802R C OR CL	12	13	1.400	117	A++	7,1
11541 0128	541 0803R C OR CL	16	18	1.890	118	A++	7,1
11541 0129	541 1601R C OR CL	15	17	2.070	138	A++	7,2
11541 0130	541 1602R C OR CL	23	25	2.760	120	A++	7,2

\* see notes

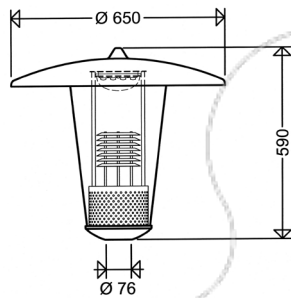
! Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).



## Accessories / Spare Parts

Article no.	Type	
10041 9000	10041	spare cover
10041 9001	10041 C	glare limitation cover
90113 0002	HA 08	visor to avoid backwards luminous flux for 541 08.. C OR
90113 0003	HA 16	visor to avoid backwards luminous flux for 541 16.. C OR
90116 9002	RS LED	louver stack, aluminium
90126 0001	RZ 1 schwarz	adapter for pole-top ø of 60 mm, black

## Pole-Top LED-Light Fitting Series 543... C



### Applications:

#### 543... ABX:

Residential areas, residential and side streets, low traffic areas, footpaths and cycle tracks etc.

#### 543... 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, conical.

**Louver stack:** Anodized pure aluminium.

**Electrical kit:** Wired ready for installation, plug-type device to the mains connection terminal, cable retainer for connection cable, with LED module, heat sink and ECG.

**Light distribution:** Asymmetrical extremely wide beam (ABX) or circular beam (R). Anodized pure aluminium louver stack, frosted cover for glare limitation.

**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:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000h$

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

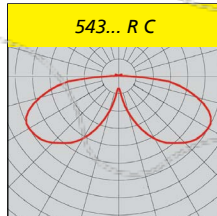
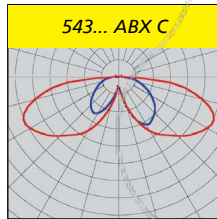
**Without control phase (LA):** Automatic dimming by integrated timer. Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

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

Also, combinations of the functions are possible (CL LR / CL LA).



### Further Options:

- 3,000K, light colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class I (SKI)
- seawater-resistant version (SWP)
- without frosted cover (appr. 10% higher luminous flux)
- without louver stack OR
- aluminium roof, standard colour RAL 7035 (series 543... ALU)
- Light Management System (LIMAS) in protection class I (SKI)
- special coating in other RAL-colours



without frosted cover



without louver stack  
(C OR)



without frosted cover/louver  
stack (OR)

### Product highlights:

- ECG with high surge voltage resistance, reliable due to overload and short circuit protection
- optimal light distribution due to direct beam LED with high efficient optics
- excellent glare limitation due to frosted cover of the LED module
- 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 maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]*	Energy efficiency class	Weight [kg] (without packing material)
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## 543... C



### asymmetrical extremely wide beam

11543 0030	543 0801ABX C	9		1.150	128	A++	7,0
11543 0033	543 0802ABX C	13		1.560	120	A++	7,0
11543 0046	543 0803ABX C	18		2.100	117	A++	7,0
11543 0010	543 1601ABX C	17		2.300	135	A++	7,1
11543 0055	543 1602ABX C	25		3.070	123	A++	7,1
11543 0154	543 0801ABX C CL	8	9	1.040	130	A++	7,0
11543 0047	543 0802ABX C CL	12	13	1.400	117	A++	7,0
11543 0048	543 0803ABX C CL	16	18	1.890	118	A++	7,0
11543 0036	543 1601ABX C CL	15	17	2.070	138	A++	7,1
11543 0038	543 1602ABX C CL	23	25	2.760	120	A++	7,1

### symmetrical circular beam

11543 0070	543 0801R C	9		1.150	128	A++	7,0
11543 0071	543 0802R C	13		1.560	120	A++	7,0
11543 0072	543 0803R C	18		2.100	117	A++	7,0
11543 0039	543 1601R C	17		2.300	135	A++	7,1
11543 0056	543 1602R C	25		3.070	123	A++	7,1
11543 0155	543 0801R C CL	8	9	1.040	130	A++	7,0
11543 0073	543 0802R C CL	12	13	1.400	117	A++	7,0
11543 0074	543 0803R C CL	16	18	1.890	118	A++	7,0
11543 0075	543 1601R C CL	15	17	2.070	138	A++	7,1
11543 0045	543 1602R C CL	23	25	2.760	120	A++	7,1

\* see notes

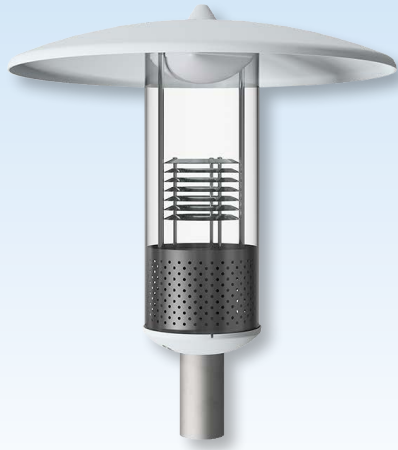
! Also available with output reduction (LR / LA) ) as well as combinations of these functions (CL LR / CL LA).

## Accessories / Spare Parts

Article no.	Type	
10043 9000	10043	clear PMMA glass cover, conical
90113 0002	HA 08	visor to avoid backwards luminous flux for 543 08.. C
90113 0003	HA 16	visor to avoid backwards luminous flux for 543 16.. C
90127 9000	DACH 542/43 AL	spare roof, aluminium, for light fittings with separate cover nut
90116 9003	RS 543 LED	louver stack, aluminium, LED design for series 543/553...
90044 0001	RZ 1 grau	adapter for pole-top ø 60mm



## Pole-Top LED-Light Fitting Series 553... C



### Applications:

#### 553... ABX:

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).

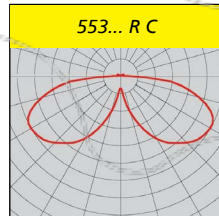
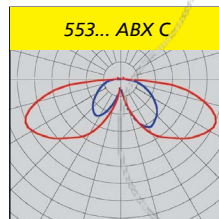
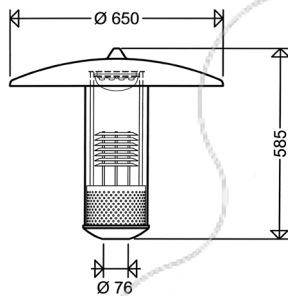
**Supporting section:** Aluminium powder coated light grey (RAL 7035).

**Cover:** PMMA, clear, cylindrical.

**Electrical kit:** Wired ready for installation, plug-type device to the mains connection terminal, cable retainer for connection cable, with LED module, heat sink and ECG.

**Light distribution:** Asymmetrical extremely wide beam (ABX) or circular beam (R). Anodized pure aluminium louver stack, frosted cover for glare limitation.

**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:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000h$

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

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

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000K, light colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class I (SKI)
- seawater-resistant version (SWP)
- without frosted cover (appr. 10%

- higher luminous flux)
- without louver stack OR
- aluminium roof, standard colour RAL 7035 (series 553... ALU)
- Light Management System (LIMAS) protection class I (SKI)
- special coating in other RAL-colours



without frosted cover



without louver stack  
(C OR)



without frosted cover/louver  
stack (OR)

### Product highlights:

- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimal light distribution due to direct beam LED with high efficient optics
- excellent glare limitation due to frosted cover of the LED module
- 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 maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm]*	Luminous efficacy [lm/W]*	Energy efficiency class	Weight [kg] (without packing material)
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## 553... C



### asymmetrical extremely wide beam

11553 0050	553 0801ABX C	9		1.150	128	A++	7,0
11553 0051	553 0802ABX C	13		1.560	120	A++	7,0
11553 0052	553 0803ABX C	18		2.100	117	A++	7,0
11553 0053	553 1601ABX C	17		2.300	135	A++	7,1
11553 0054	553 1602ABX C	25		3.070	123	A++	7,1
11553 0049	553 0801ABX C CL	8	9	1.040	130	A++	7,0
11553 0057	553 0802ABX C CL	12	13	1.400	117	A++	7,0
11553 0058	553 0803ABX C CL	16	18	1.890	118	A++	7,0
11553 0059	553 1601ABX C CL	15	17	2.070	138	A++	7,1
11553 0060	553 1602ABX C CL	23	25	2.760	120	A++	7,1

### symmetrical circular beam

11553 0068	553 0801R C	9		1.150	128	A++	7,0
11553 0069	553 0802R C	13		1.560	120	A++	7,0
11553 0070	553 0803R C	18		2.100	117	A++	7,0
11553 0071	553 1601R C	17		2.300	135	A++	7,1
11553 0072	553 1602R C	25		3.070	123	A++	7,1
11553 0074	553 0801R C CL	8	9	1.040	130	A++	7,0
11553 0075	553 0802R C CL	12	13	1.400	117	A++	7,0
11553 0076	553 0803R C CL	16	18	1.890	118	A++	7,0
11553 0077	553 1601R C CL	15	17	2.070	138	A++	7,1
11553 0078	553 1602R C CL	23	25	2.760	120	A++	7,1

\* see notes

! Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).

## Accessories / Spare Parts

Article no.	Type	
10051 9000	10051	clear PMMA glass cover, cylindrical, series 553...
90113 0002	HA 08	visor to avoid backwards luminous flux for 553 08.. C
90113 0003	HA 16	visor to avoid backwards luminous flux for 553 16.. C
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 9003	RS 543 LED	louver stack, aluminium, LED design for series 543/553...
90044 0001	RZ 1 grau	adapter for pole-top Ø 60mm

## Pendant LED Luminaires

### Series 564/565 ...

#### Applications:

Renewal of villages and historic city centres, low traffic areas, pedestrian areas, promenades, public parks.

#### Design:

**Housing:** Aluminium sheet, powder coated in deep black colour (RAL 9005).

**Cover:** PMMA, clear pearled (P).

**Electro kit:** With ECG and LED, wired

ready for connection, cable retainer for the connection cable.

**Light distribution:** Asymmetrical extremely wide beam (ABX) or circular beam (R).

**Light diffuser:** Optics.

**Mounting:** To pole top sections with internal thread 3/4".

#### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_g > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

#### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMA)

1-10V (DIMA)

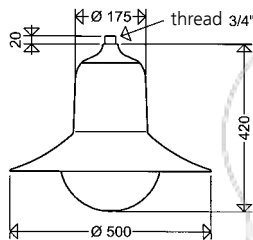
**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire lifetime of the LED-modules.

Also, combinations of the functions are possible (CL LR / CL LA).

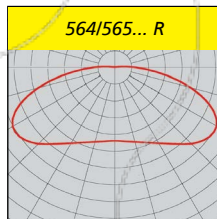
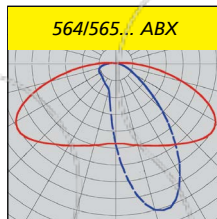
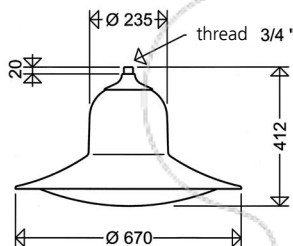
#### Further Options:

- 3,000 K, light-colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class II (SKII)
- special painting in RAL- or DB- colours

#### Series 564



#### Series 565



#### Product highlights:

- ECG with high surge voltage resistance, reliable due to overload and short circuit protection
- optimal light distribution due to highly efficient lens optics with direct beam
- good glare limitation due to 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. Any failure of a particular single LED will not create any dark zone in the road. The uniformity of the illumination is kept.
- quick maintenance and change of components due to an easily interchangeable gear-tray system (modular concept)
- future proof by using standardized LED-modules (Zhaga)

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Luminous flux [lm] *	Power/ consumption [W]	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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### 564/565...



11564 0003	564 0803ABX	18	2.500	139	A++	3,9
11564 0004	564 0803R	18	2.500	139	A++	3,9
11564 0001	564 1603ABX	35	5.000	143	A++	3,9
11564 0002	564 1603R	35	5.000	143	A++	3,9

Wind load area  $A = 0,09m^2$

11565 0009	565 1603ABX	35	5.000	143	A++	5,6
11565 0005	565 1603R	35	5.000	143	A++	5,6
11565 0010	565 3203ABX	70	9.940	142	A++	5,7
11565 0006	565 3203R	70	9.940	142	A++	5,7

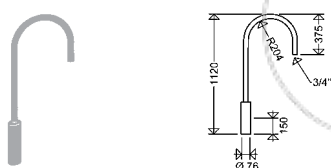
Wind load area  $A = 0,12m^2$

\* see notes

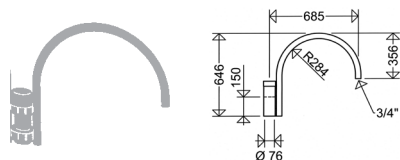




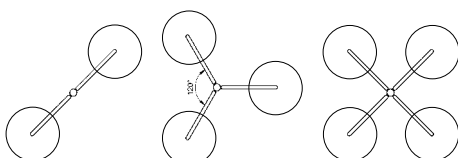
## Round arch pole-top adapter



Article no.	Type	Description	Weight
61999 0001	<b>619/1</b>	for 1 fitting	8,8 kg



62299 0001	<b>622/1</b>	for 1 fitting	7,2 kg
62299 0002	<b>622/2</b>	for 2 fitting	11,8 kg
62299 0003	<b>622/3</b>	for 3 fittings	16,4 kg
62299 0004	<b>622/4</b>	for 4 fittings	21,1 kg



## Accessories / Spare Parts

Article no.	Type	
10064 9003	<b>10064 P LED</b>	PMMA-glass, clear-pearled for 564... LED
10065 9001	<b>10065 P</b>	PMMA-glass, clear-pearled for 565... LED
90113 0002	<b>HA 08</b>	visor to avoid backwards luminous flux for 564/565 08..
90113 0003	<b>HA 16</b>	visor to avoid backwards luminous flux for 564/565 16..
90113 0005	<b>HA 32</b>	visor to avoid backwards luminous flux for 564/565 32..



## Modern LED Plane Surface Floodlight with Multi-Purpose Mounting System

### Series 48... A

#### Applications:

Car parks, outside facilities, loading areas, loading platforms, gateways, object protection and fence lighting.

#### Design:

**Housing:** Die-cast aluminium, 2-parts, powder coated in DB702N (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 IK08.

**Light distribution:** Asymmetric.

**Connection:** With isolating plug connection.

**Post top or cantilever mounting:** Die-cast aluminium, universal system for post top mounting Ø 60/76mm and side entry mounting Ø 42/60mm x 100mm.

**Wall mounting** with wall bracket.

**Inclination:** Post top mounting 0°, 5° and 10° (standard: 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

#### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000h$

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

#### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

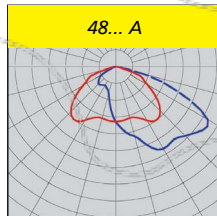
**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire lifetime of the LED-modules.

Also, combinations of the functions are possible (CL LR / CL LA).

#### Further Options:

- 3,000 K, light-colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class I (SKI)
- autonomic output reduction without control phase (LA), also available with deviating times and with a second dimming step

- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- Ready for Light Management Systems (RFL) in protection class I (SKI)
- Light Management System (LIMAS) in protection class I (SKI)
- bird deterrence (BD)
- special painting in RAL colours



#### Product highlights:

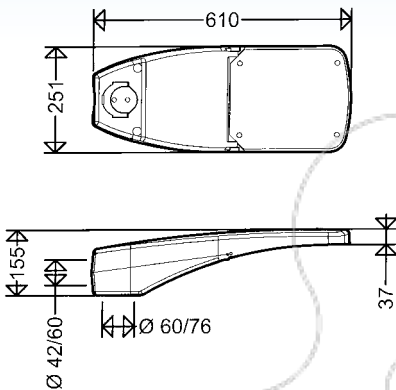
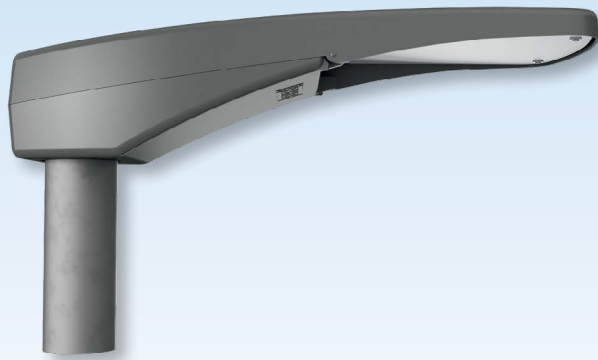
- ECG with surge voltage resistance, reliable due to overload and short circuit protection
- optimized thermal management due to direct adaption of the LED-modules to the die-cast aluminium housing, large cooling surface, excellent heat dissipation
- integrated pressure compensation system for defined „Breathing“ of the fitting
- 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
- 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 pole mounting system for post top and side entry mounting, no tools required
- adjustable inclination of the light fitting, no tools required
- easy replacement of the ECG due to removable upper part of the housing. No painful working overhead.
- 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.
- 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.
- eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

#### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

#### Outstanding mounting advantage



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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## 48... A



Wind load area  
A = 0,05m²

48001 0202	<b>48 0801A</b>	9	1.350	150	A++	7,0
48001 0203	<b>48 0802A</b>	13	1.850	142	A++	7,0
48001 0204	<b>48 0803A</b>	18	2.500	139	A++	7,0
48001 0205	<b>48 1601A</b>	17	2.610	154	A++	7,0
48001 0206	<b>48 1602A</b>	25	3.550	142	A++	7,0
48001 0207	<b>48 1603A</b>	35	4.800	137	A++	7,0
48001 0213	<b>48 2401A</b>	26	4.000	154	A++	7,1
48001 0214	<b>48 2402A</b>	37	5.430	147	A++	7,1
48001 0216	<b>48 2403A</b>	53	7.330	138	A++	7,4
48001 0208	<b>48 3201A</b>	34	5.250	154	A++	7,5
48001 0209	<b>48 3202A</b>	50	7.120	142	A++	7,5
48001 0210	<b>48 3203A</b>	70	9.610	137	A++	7,5

\* see notes

**!** 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

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Article no.	Type	
48002 9000	<b>48/010</b>	flat safety glass

## Modern LED Plane Surface Floodlight with Multi-Purpose Mounting System Series 47... A

### Applications:

Car parks, outside facilities, loading areas, loading platforms, gateways, object protection and fence lighting.

### Design:

**Housing:** Die-cast aluminium, 2-parts, powder coated in DB702N (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 beam.

**Connection:** With isolating plug connection with cable relief.

**Post top or cantilever mounting:** Die-cast aluminium, universal system for post top mounting Ø 60/76mm and side entry mounting Ø 42/60mm x 100mm.

**Wall mounting** with wall bracket.

**Inclination:** Post top mounting 0°, 5° and 10° (standard: 0°). Side entry mounting 0°, -5°, -10° and -15° depending on inclination of the cantilever.

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_3 > 70$ , lifetime  $L_{90} > 100,000h$

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMD)

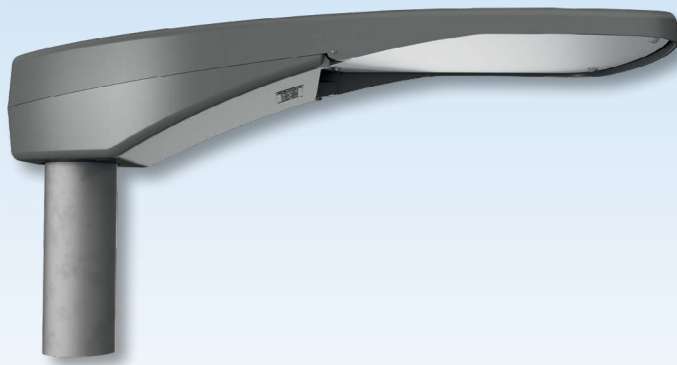
#### 1-10V (DIMA)

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

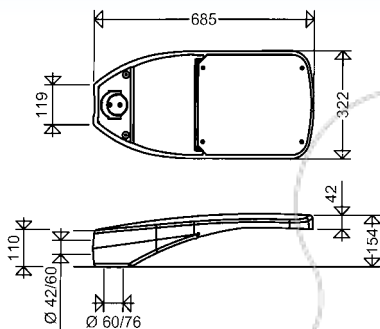
Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

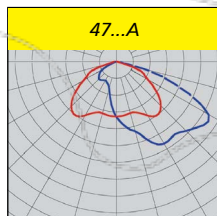
- 3,000 K, light-colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- protection class I (SKI)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- seawater-resistant version (SWP)
- Ready for Light Management Systems (RFL) in protection class I (SKI)
- Light Management System (LIMAS) in protection class I (SKI)
- bird deterrence (BD)
- special painting in all RAL colours



**DB** standardized by Deutsche Bahn AG



### 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
- integrated pressure compensation system for defined „Breathing“ of the fitting
- 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
- 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 pole mounting system for post top and side entry mounting, no tools required
- adjustable inclination of the light fitting, no tools required
- easy replacement of the ECG due to removable upper part of the housing. No painful working overhead.
- 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.
- 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.
- eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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## 47... A



47000 0105	<b>47 4801A</b>	52	8.180	157	A++	10,2
47000 0131	<b>47 4802A</b>	75	11.040	147	A++	10,2
47000 0109	<b>47 4803A</b>	106	14.860	140	A++	10,2
47000 0107	<b>47 6401A</b>	69	11.080	161	A++	10,3
47000 0134	<b>47 6402A</b>	99	14.730	149	A++	10,3
47000 0110	<b>47 6403A</b>	140	19.600	140	A++	10,3

\* see notes

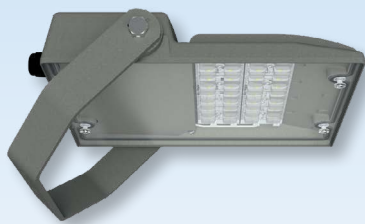
Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).



## Accessories / Spare Parts

Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Article no.	Type	
47001 9002	<b>47/010</b>	flat safety glass



## FOCO

### LED Plane Surface Floodlight

#### with variable setting of the luminous flux

#### Series 7600... A VARIO

##### Applications:

Car Parks, industrial areas, stockyards, loading areas, illumination close to buildings, object protection and fence illumination, gateways, accent lighting, illumination of building and facades etc.

##### Design:

**Housing:** Die-cast aluminium, 1-part, powder coated DB702N (mica-iron paint, grey) with LED-Module, optics and electronic ballast.

**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:** Asymmetrical beam.

**Connection:** Terminal compartment, accessible from the outside, 3-pole terminal, max. clamping range 2,5 mm<sup>2</sup>.

**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:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

##### Options:

On request also available with the following configurations (please mention in your enquiry or order):

##### 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%). Further dimm levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

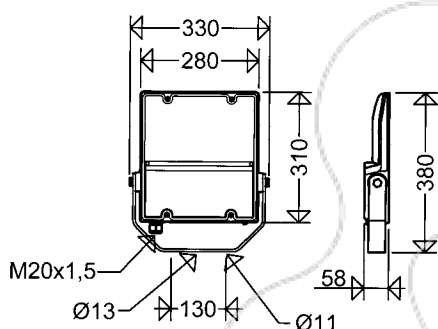
##### DALI interface (DIMD)

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

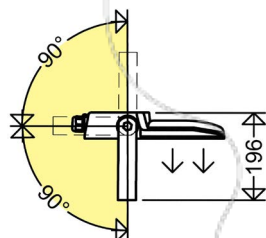
Also, combinations of the functions are possible (CL LR / CL LA).

##### Options:

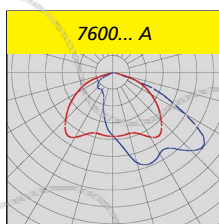
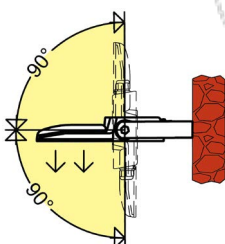
- 3,000K, light colour 730 (ca. 8% less light output)
- 1,800K, light colour 518 „Amber“ (ca. 38% less light output)
- Optics asymmetrical wide beam (AB)
- Optics asymmetrical extremely wide beam (ABX)
- optics for ME-classes (AB3)
- low glare optics (ABL)
- high protection (HR) against corrosive atmospheres or harmful gases
- dimmable via DALI (DIMD)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- special painting in all RAL colours



Swivel range



Standard Mounting



##### Product highlights:

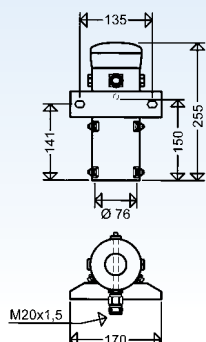
- reduction of the variety of versions, two Versions of luminaire replaces conventional luminaires from HME 80/125W to HST 50/70W (L50) or from HME 250W up to HSE 150W (L100)
- easy, quick, tool-free adjustment the luminous flux on site via switch in the terminal compartment, accessible from the outside, 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 LED are overlapping.
- constant high luminous flux over the life of the LED due to Constant luminous flux function (option CL)
- eco-friendly, no light emission into the upper half-space. Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

##### Notes:

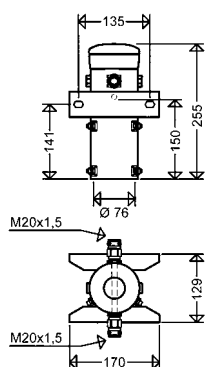
Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

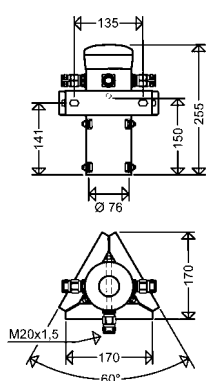
#### Pole top for single mounting 7600/1 M



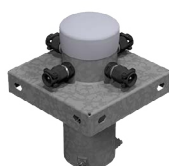
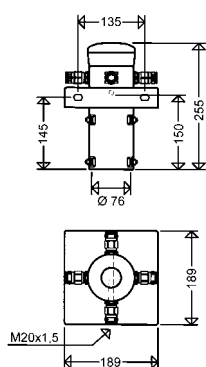
#### Pole top for dual mounting 7600/2 M



#### Pole top for threefold mounting 7600/3 M



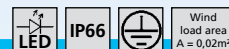
#### Pole top for fourfold mounting 7600/4 M



All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.

Article No.	Type	Power consumption [W]*	Luminous flux [lm] <sup>1)</sup> *	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] (without packing material)
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### 7600 ... A VARIO



The luminous flux is variably adjustable to values between 2,610lm and 4,800lm (Version L50) or 5,250lm and 9,600lm (Version L100). Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

76000 0100	<b>7600 L50A VARIO</b>	17	2.610	154	A++	HME 80, HST 50	4,1
		18	2.760 <sup>2)</sup>	153	A++	HME 125	
		22	3.230	147	A++	2 x HME 80, HST 70	
		35	4.800	137	A++	2 x HME 125	
76000 0101	<b>7600 L100A VARIO</b>	34	5.250	154	A++	2 x HME 125	4,2
		47	6.800	145	A++	HST 100	
		54	7.740 <sup>2)</sup>	143	A++	HME 250	
		70	9.600	137	A++	HSE 150	

1) Examples of possible settings  
2) Factory setting

\* see notes

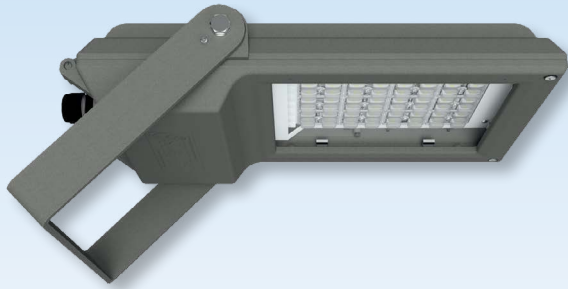
\*\* The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

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	<b>7600/010</b>	spare safety glas
75739 9006	<b>7600/1 M</b>	pole top for single mounting
75739 9007	<b>7600/2 M</b>	pole top for dual mounting
75739 9009	<b>7600/3 M</b>	pole top for threefold mounting
75739 9008	<b>7600/4 M</b>	pole top for fourfold mounting
90120 9011	<b>2530</b>	plastic cable gland M20 x 1,5 black
90121 9008	<b>2600</b>	plastic plug M20 x 1,5 black





## FOCO L LED Plane Surface Floodlight Series 7700... A

### Applications:

Car Parks, industrial areas, stockyards, loading areas, illumination close to buildings, object protection and fence lighting, gateways, accent lighting, illumination of building and facades etc.

### Design:

**Housing:** Die-cast aluminium, 2-parts, powder coated in DB702N (mica-iron paint, grey).

**Upper part:** With LED- and optics-modules

**Lower part:** With ECG, glass cover, cable entry with cable relief, retractable.

**Glass:** Flat safety glass pane, resistant to temperature changes, impact resistant IK10, silicone gasket.

**Light distribution:** Narrow beam.

**Connection:** 3-pole terminal, max. clamping range 2,5 mm<sup>2</sup>.

**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 respectively for direct pole mounting in addition with pipe clamps **ROB 60/76** (see accessories).

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMD)

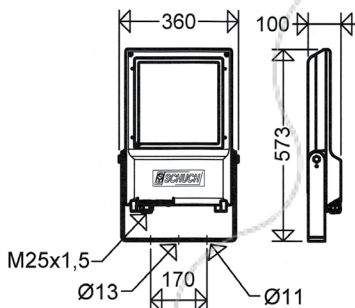
#### 1-10V (DIMA)

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

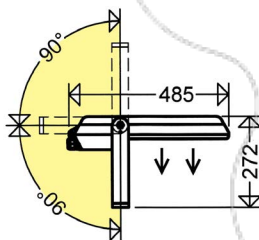
Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

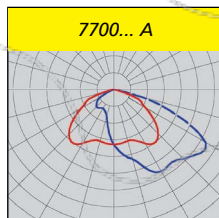
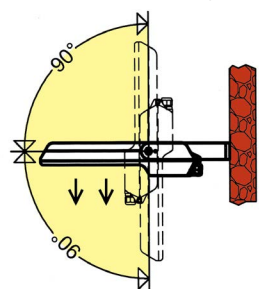
- 3,000 K, light-colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- asymmetrical wide beam (AB-optics)
- asymmetrical extremely wide beam (ABX)
- optics for ME-classes (AB3)
- low glare optics (ABL)
- high protection (HR) against corrosive atmospheres or harmful gases
- dimmable via DALI (DIMD)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- special painting in all RAL colours



Swivel range



Standard Mounting



### Product highlights:

- 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.
- constant high luminous flux over the life of the LED due to Constant luminous flux function (option CL)
- 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. Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [ca. kg] (without packaging)
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## 7700 ... A

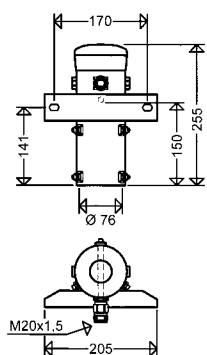


77000 0002	<b>7700 3203A</b>	70		9.800	140	A++	9,2
77000 0003	<b>7700 4803A</b>	106		14.700	139	A++	9,6
77000 0004	<b>7700 6403A</b>	140		19.400	139	A++	9,6
77000 0018	<b>7700 3203A CL</b>	63	70	8.820	140	A++	9,2
77000 0019	<b>7700 4803A CL</b>	95	106	13.230	139	A++	9,6
77000 0020	<b>7700 6403A CL</b>	126	140	17.460	139	A++	9,6

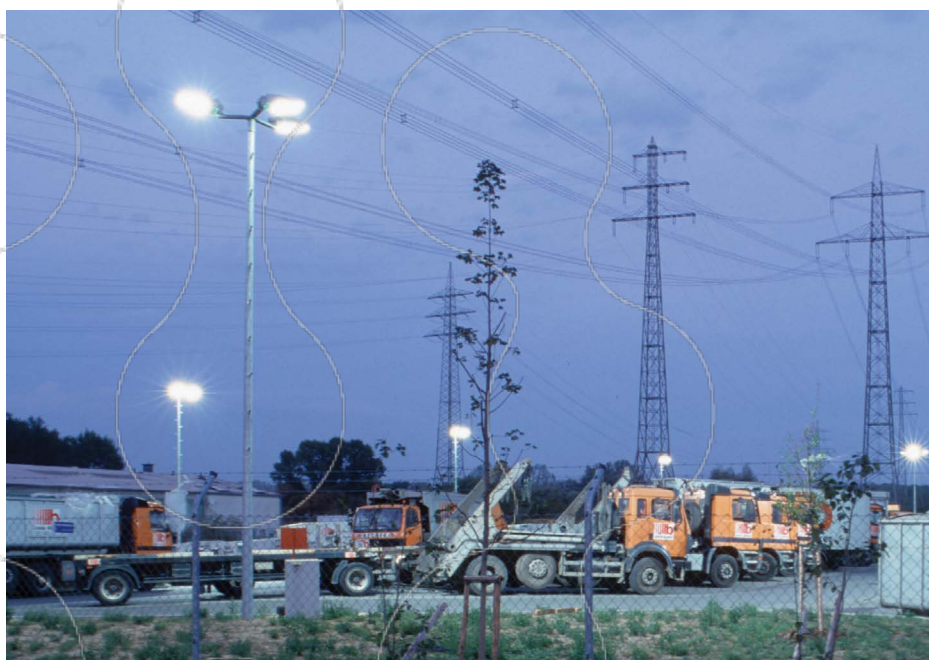
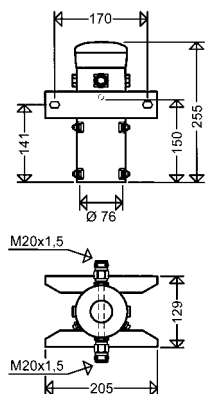
\* see notes

Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).

Pole top for single mounting 7700/7800/1 M



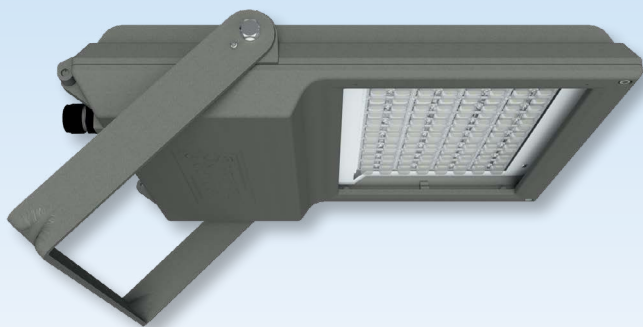
Pole top for dual mounting 7700/7800/2 M



## Accessories / Spare Parts

Article no.	Type	
78001 9002	<b>7700/010</b>	spare safety glas
75739 9010	<b>7700/7800/1 M</b>	pole top for single mounting
75739 9011	<b>7700/7800/2 M</b>	pole top for dual mounting
90270 0005	<b>ROB 60/76</b>	pipe clamp for direct pole mounting or on multiple post top adapters
90120 9011	<b>2530</b>	plastic cable gland M20 x 1,5 black
90121 9008	<b>2600</b>	plastic plug M20 x 1,5 black

All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.



## FOCO XL LED Plane Surface Floodlight Series 7800... A

### Applications:

Car Parks, industrial areas, stockyards, large opencast mining equipment, loading areas, crane lighting (with vibration absorbing suspension device), illumination close to buildings, object protection and fence lighting, gateways, accent lighting, illumination of building and facades etc.

### Design:

**Housing:** Die-cast aluminium, 2-parts, powder coated in DB702N (mica-iron paint, grey).

**Upper part:** With LED-module and optics,

**Lower part:** With ECG, glass cover, cable entry with cable relief, retractable.

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

**Light distribution:** Narrow beam.

**Connection:** 3-pole terminal, max. clamping range 2,5 mm<sup>2</sup>.

**Cable entry:** 2 cable entries M25 x 1.5 (1 cable gland and 1 screw plug).

**Mounting:** Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting respectively for direct pole mounting in addition with pipe clamps **ROB 60/76** (see accessories).

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

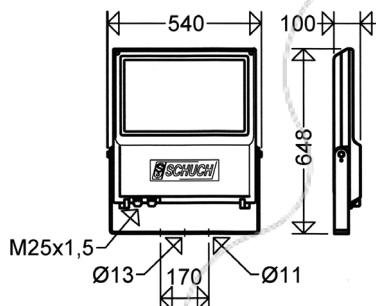
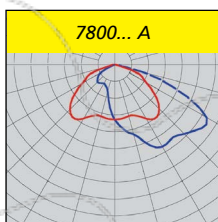
**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire lifetime of the LED-modules.

Also, combinations of the functions are possible (CL LR / CL LA).

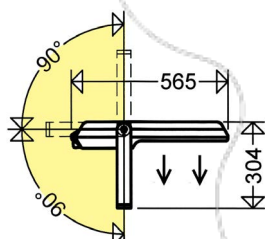
### Further Options:

- 3,000 K, light-colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- asymmetrical wide beam (AB)
- asymmetrical extremely wide beam (ABX)
- optics for M-classes (AB3)
- low glare optics (ABL)

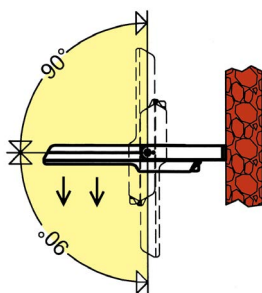
- high protection (HR) against corrosive atmospheres or harmful gases
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB) or emergency mains respectively
- special painting in all RAL colours



Swivel range



Standard Mounting



### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

### 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. Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)



Article no.	Type	number of ECG	Power consumption [W]* (CL: start of operating life)	Power consumption [W]* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [ca. kg] (without packaging)
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## 7800 ... A

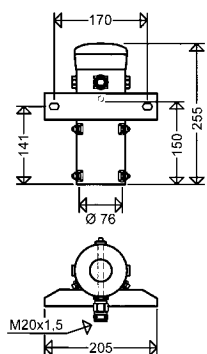


78000 0021	<b>7800 6403A</b>	1	140		19.900	142	A++	15,9
78000 0022	<b>7800 12803A</b>	2	280		38.300	137	A++	17,0
78000 0024	<b>7800 6403A CL</b>	1	126	140	17.910	142	A++	15,9
78000 0025	<b>7800 12803A CL</b>	2	252	280	34.470	137	A++	17,0

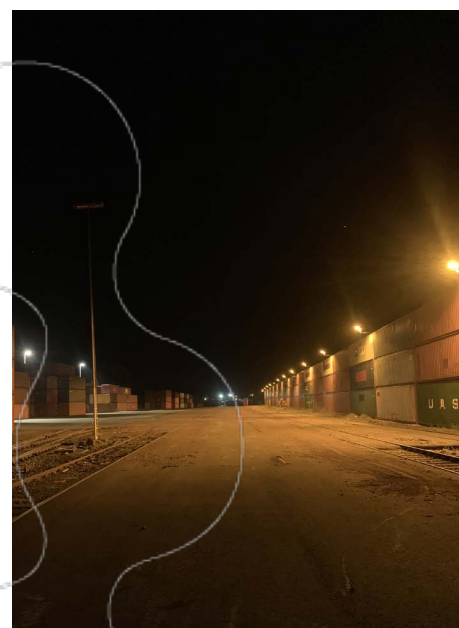
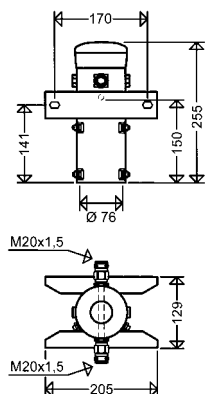
\* see notes

Also available with output reduction (LR / LA) as well as combinations of these functions (CL LR / CL LA).

Pole top for single mounting 7700/7800/1 M



Pole top for dual mounting 7700/7800/2 M



## Accessories / Spare Parts

Article no.	Type	
78001 9001	<b>7800/010</b>	spare safety glas
75739 9010	<b>7700/7800/1 M</b>	pole top for single mounting
75739 9011	<b>7700/7800/2 M</b>	pole top for dual mounting
90270 0005	<b>ROB 60/76</b>	pipe clamp for direct pole mounting or on multiple post top adapters
90117 9000	<b>2537</b>	plastic cable gland M25 x 1,5 black
90118 9000	<b>2538</b>	plastic plug M25 x 1,5 black

All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.

## LED Plane Surface Floodlight Series 7571/7572/7573... A

### Applications:

Car parks, outside facilities, loading areas, illumination close to buildings, fence arrangements, gateways, object protection, safety and observation illumination.

### Design:

**Housing:** Silumin sheet powder coated in light grey (RAL 7035), built-in control gear, wired ready for connection, with integrated venting system.

**Glass:** Frameless, hinged, tiltable by loosening 2 bolts, silicone gasket.

**LED-tray:** Aluminium, compact unit with

LED module and optics screwed to the glass, hinged.

**Light distribution:** Asymmetrical.

**Connection terminal:** 3-poles up to 4mm<sup>2</sup> or 4-poles version LR.

**Cable entry:** 1 gland M20

**Mounting:** Mounting bracket swivel range 180° (wall or ceiling mounting).

Pole mounting by using **7571/1 M** on poles with Ø 76mm (7571/7572 ...) or by using pipe clamp **ROB 60/76** (7573 ...)

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

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

Also, combinations of the functions are possible (CL LR / CL LA).

### Optionen:

- 3,000K, light colour 730 (ca. 8% lower luminous flux) (ABX)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- Optics asymmetrical wide beam (AB)
- Optics asymmetrical extremely wide beam
- for connection to group or central battery systems (ZB) or emergency mains respectively
- special painting in all RAL colours

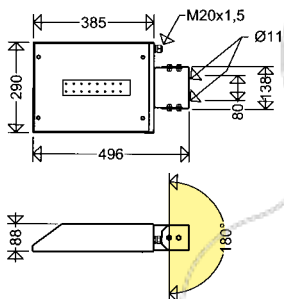
### Product highlights:

- ECG with high surge voltage resistance, reliable due to overload and short circuit protection
- protection against contact of the LED board due to sandwich design of glass and reflector
- optimal light distribution due to highly efficient optics with direct beam
- 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 an easily interchangeable gear-tray system
- eco-friendly, no light pollution in the upper space, Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)



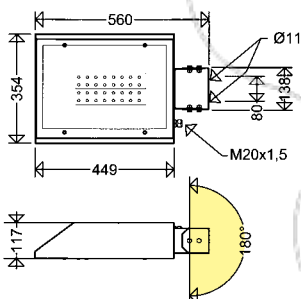
Pictures: Special paint colour DB702N (mica-iron paint, grey)

#### 7571...



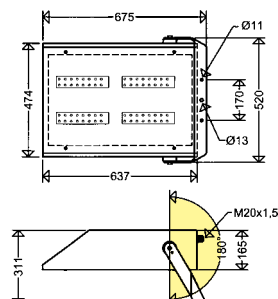
Swivel range 180°

#### 7572...

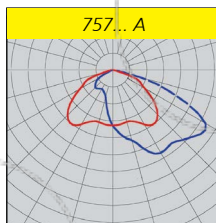


Swivel range 180°

#### 7573...



Swivel range 180°



### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article No.	Type	Power consumption [W]	Power consumption/LR [W] (reduced )	Luminous flux [lm]	Light output [lm/W]	Energy efficiency class	Weight [kg] (without packing material)
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## 7571 1603A

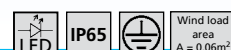


75711 0001	<b>7571 1603A</b>	35		4880	139	A++	4,1
75711 0031	<b>7571 1603A CL</b>	32	35	4390	137	A++	4,1

\*see notes



## 7572 3203A



75721 0004	<b>7572 3203A</b>	70		9860	141	A++	5,7
75721 0034	<b>7572 3203A CL</b>	63	70	8870	141	A++	5,7

\*see notes



## 7573 6403A



75733 0033	<b>7573 6403A</b>	140		19550	140	A++	9,5
75733 0036	<b>7573 6403A CL</b>	126	140	17600	140	A++	9,5

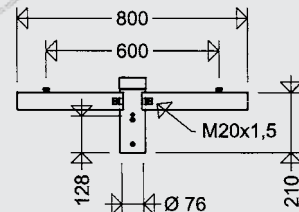
\*see notes



Post top 7571/1 M

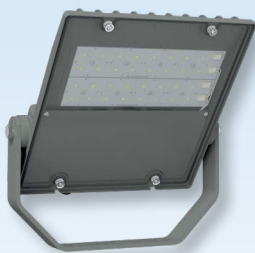


Pole cross arm 7573 TR



## Accessories / Spare Parts

Article no.	Type	
75001 9016	<b>7511 LED</b>	spare glass pane 7571... LED
75001 9008	<b>7502 LED</b>	spare glass pane 7572... LED
75001 9009	<b>7501 LED</b>	spare glass pane 7573... LED
25610 9000	<b>2561</b>	plastic cable gland M20 x 1,5
75739 9003	<b>7571/1 M</b>	pole top with accessories for single mounting on pole Ø 76mm
75739 9004	<b>7571/2 M</b>	pole top with accessories for double mounting on pole Ø 76mm
75739 0002	<b>7573 TR</b>	pole cross arm with accessories for mounting 2 plane surface floodlights to poles of Ø 76mm
90270 0005	<b>ROB 60/76</b>	pipe clamp for direct pole mounting or on multiple post top adapters



## FOCO LED 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 DB702N (mica-iron paint, grey).

with LED-Module, optics (versions TB and T) and electronic ballast.

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

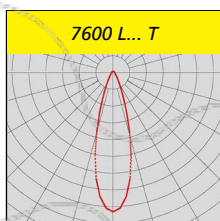
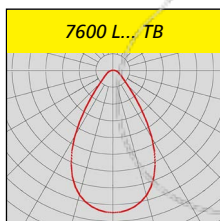
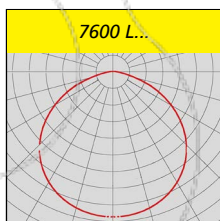
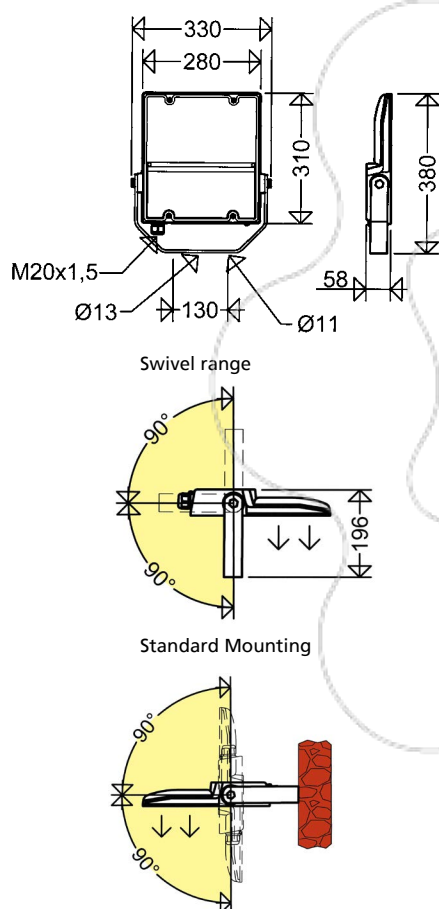
**Switch** for setting the luminous flux in the terminal compartment, accessible from the outside.

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

**Connection:** Terminal compartment, accessible from the outside, 3-pole terminal, max. clamping range 2,5 mm<sup>2</sup>.

**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:** Zhaga compliant, 4,000K,  $R_3 > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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%). Further dimming levels possible.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMD)

**Constant luminous flux function (CL):** The set Luminous flux is kept on a constant level over the entire lifetime of the LED-modules.

Also, combinations of the functions are possible (CL LR / CL LA).

### Options:

- 3,000K, light colour 730 (ca. 8% less light output)
- 1,800K, light colour 518 „Amber“ (ca. 38% less light output)
- 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 mains respectively
- special painting in all RAL colours
- expanded Swivel range

### Product highlights:

- reduction of the variety of versions, two Versions of luminaire replaces conventional luminaires from HME 80/125W to HST 50/70W (L50) or from HME 250W up to HSE 150W (L100)
- 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.
- constant high luminous flux over the life of the LED due to Constant luminous flux function (option CL)
- future proof by using standardized LED-modules (Zhaga)

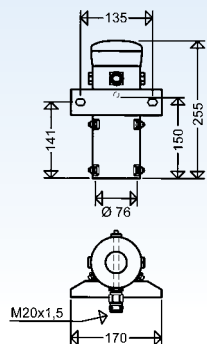
### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

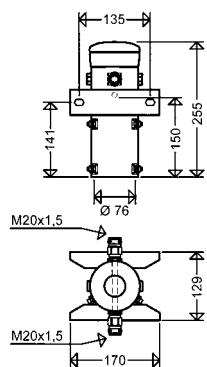
All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



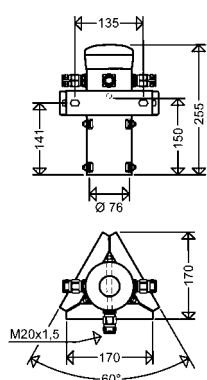
Pole top for single mounting 7600/1 M



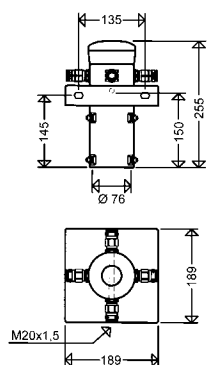
Pole top for dual mounting 7600/2 M



Pole top for threefold mounting 7600/3 M



Pole top for fourfold mounting 7600/4 M



All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.

Article No.	Type	narrow-wide beam	narrow-beam	Power consumption [W]*	Luminous flux [lm] <sup>1)</sup>	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] (without packing material)
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## 7600 ... VARIO



The luminous flux is variably adjustable to values between 2,610lm and 4,800lm (Version L50) or 5,250lm and 9,600lm (Version L100). Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

76000 0102	7600 L50 VARIO			17	2.610	154	A++	HME 80, HST 50	4,1
				18	2.760 <sup>2)</sup>	153	A++	HME 125	
				22	3.230	147	A++	2 x HME 80, HST 70	
				35	4.800	137	A++	2 x HME 125	
76000 0104	7600 L50TB VARIO	•		17	2.610	154	A++	HME 80, HST 50	4,1
				18	2.760 <sup>2)</sup>	153	A++	HME 125	
				22	3.230	147	A++	2 x HME 80, HST 70	
				35	4.800	137	A++	2 x HME 125	
76000 0106	7600 L50T VARIO	•		17	2.610	154	A++	HME 80, HST 50	4,1
				18	2.760 <sup>2)</sup>	153	A++	HME 125	
				22	3.230	147	A++	2 x HME 80, HST 70	
				35	4.800	137	A++	2 x HME 125	
76000 0103	7600 L100 VARIO			34	5.250	154	A++	2 x HME 125	4,2
				47	6.800	145	A++	HST 100	
				54	7.740 <sup>2)</sup>	143	A++	HME 250	
				70	9.600	137	A++	HSE 150	
76000 0105	7600 L100TB VARIO	•		34	5.250	154	A++	2 x HME 125	4,2
				47	6.800	145	A++	HST 100	
				54	7.740 <sup>2)</sup>	143	A++	HME 250	
				70	9.600	137	A++	HSE 150	
76000 0107	7600 L100T VARIO	•		34	5.250	154	A++	2 x HME 125	4,2
				47	6.800	145	A++	HST 100	
				54	7.740 <sup>2)</sup>	143	A++	HME 250	
				70	9.600	137	A++	HSE 150	

1) Examples of possible settings  
2) Factory setting

\* see notes

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

! 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	7600/010	spare safety glas
90270 0005	ROB 60/76	pipe clamp for direct pole mounting or on multiple post top adapters
75739 9006	7600/1 M	pole top for single mounting
75739 9007	7600/2 M	pole top for dual mounting
75739 9009	7600/3 M	pole top for threefold mounting
75739 9008	7600/4 M	pole top for fourfold mounting
90120 9011	2530	plastic cable gland M20 x 1,5 black
90121 9008	2600	plastic plug M20 x 1,5 black



## FOCO L LED 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 DB702N (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:** Narrow-wide (TB) or narrow beam (T).

**Connection:** 3-pole terminal, max. clamping range 2,5 mm<sup>2</sup>.

**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 respectively for direct pole mounting in addition with pipe clamps **ROB 60/76** (see accessories).

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer.

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 step.

#### DALI interface (DIMD)

#### 1-10V (DIMA)

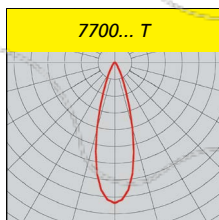
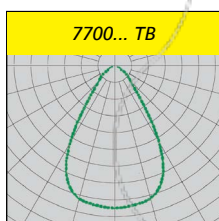
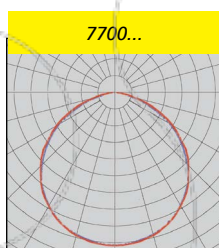
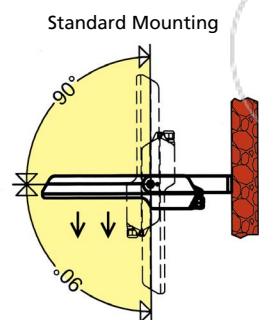
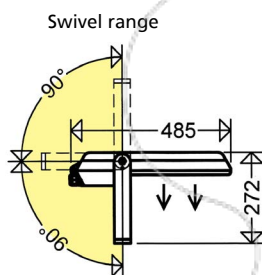
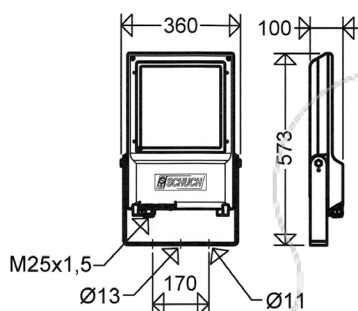
**Constant luminous flux function (CL):** Luminous flux is kept on a constant level over the entire lifetime of the LED-modules.

Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

- 3,000K, light colour **730** (ca. 8% lower luminous flux)
- 1,800K, light colour **518 „Amber“** (ca. 38% lower luminous flux)
- 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 mains respectively
- special painting in all RAL colours
- expanded Swivel range



### 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
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	narrow-wide beam	narrow-beam	Energy efficiency class	Weight (ca. kg) (without packaging)	Power/ consumption W *	Luminous flux [lm] *	Luminous efficacy [lm/W]
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## 7700 ...



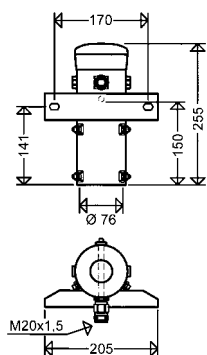
Wind  
load area  
A = 0,15m²

77000 0006	<b>7700 3203</b>			A++	9,2	70	9.800	140
77000 0010	<b>7700 3203TB</b>	•		A++	9,2			
77000 0014	<b>7700 3203T</b>		•	A++	9,2			
77000 0007	<b>7700 4803</b>			A++	9,6	106	14.700	139
77000 0011	<b>7700 4803TB</b>	•		A++	9,6			
77000 0015	<b>7700 4803T</b>		•	A++	9,6			
77000 0008	<b>7700 6403</b>			A++	9,6	140	19.400	139
77000 0012	<b>7700 6403TB</b>	•		A++	9,6			
77000 0016	<b>7700 6403T</b>		•	A++	9,6			

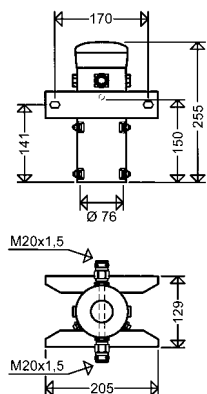
\* see notes

Also available with output reduction (LR) and constant luminous flux function (CL) or combinations of the functions (CL LR / CL LA)

Pole top for single mounting 7700/7800/1 M



Pole top for dual mounting 7700/7800/2 M



## Accessories / Spare Parts

Article no.	Type	
78001 9002	<b>7700/010</b>	spare safety glas
75739 9010	<b>7700/7800/1 M</b>	pole top for single mounting
75739 9011	<b>7700/7800/2 M</b>	pole top for dual mounting
90270 0005	<b>ROB 60/76</b>	pipe clamp for direct pole mounting or on multiple post top adapters
90120 9011	<b>2530</b>	plastic cable gland M20 x 1,5 black
90121 9008	<b>2600</b>	plastic plug M20 x 1,5 black

All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.



## FOCO XL 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 DB702N (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.

**Light distribution:** Narrow-wide (TB) or narrow beam (T).

**Connection:** 3-pole terminal, max. clamping range 2,5 mm<sup>2</sup>.

**Cable entry:** 2 cable entries M25 x 1.5 (1 cable gland and 1 screw plug).

**Mounting:** Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting respectively for direct pole mounting in addition with pipe clamps **ROB 60/76** (see accessories).

### Electrical design:

**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000h$

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Options:

On request also available with the following configurations (please mention in your enquiry or order):

#### 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.

**Without control phase (LA):** Autonomic dimming by integrated timer. 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 step.

#### DALI interface (DIMD)

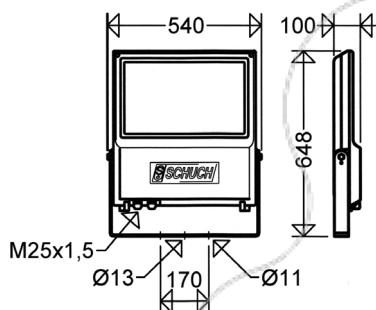
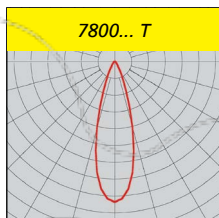
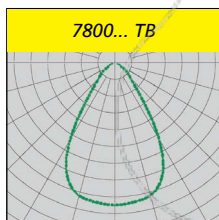
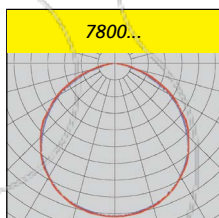
1-10V (DIMA)

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

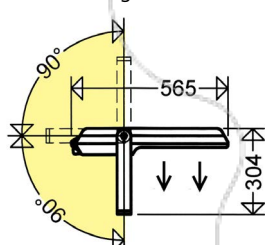
Also, combinations of the functions are possible (CL LR / CL LA).

### Further Options:

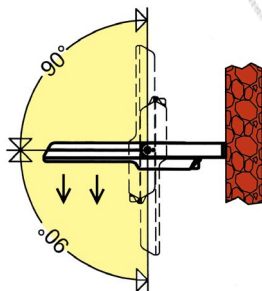
- 3,000K, light colour **730** (ca. 8% lower luminous flux)
- 1,800K, light colour **518 „Amber“** (ca. 38% lower luminous flux)
- extremely narrow beam (TX)
- extremely asymmetric beam (AX)
- high protection (HR) against corrosive atmospheres or harmful gases
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB)
- special painting in all RAL colours
- expanded Swivel range



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
- future proof by using standardized LED-modules (Zhaga)

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	narrow-wide beam	narrow-beam	Energy efficiency class	Weight [ca. kg] (without packaging)	Power / consumption W *	Luminous flux [lm] *	Luminous efficacy [lm/W]
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## 7800 ...



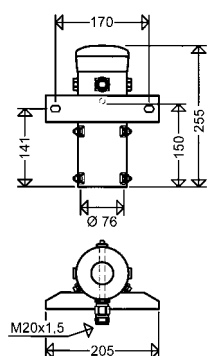
Wind  
load area  
A = 0,27m²

78000 0011	<b>7800 6403</b>			A++	15,9	140	19.900	142
78000 0001	<b>7800 6403TB</b>	•		A++	15,9			
78000 0041	<b>7800 6403T</b>		•	A++	15,9			
78000 0012	<b>7800 12803</b>			A++	17,0	280	38.300	137
78000 0002	<b>7800 12803TB</b>	•		A++	17,0			
78000 0042	<b>7800 12803T</b>		•	A++	17,0			

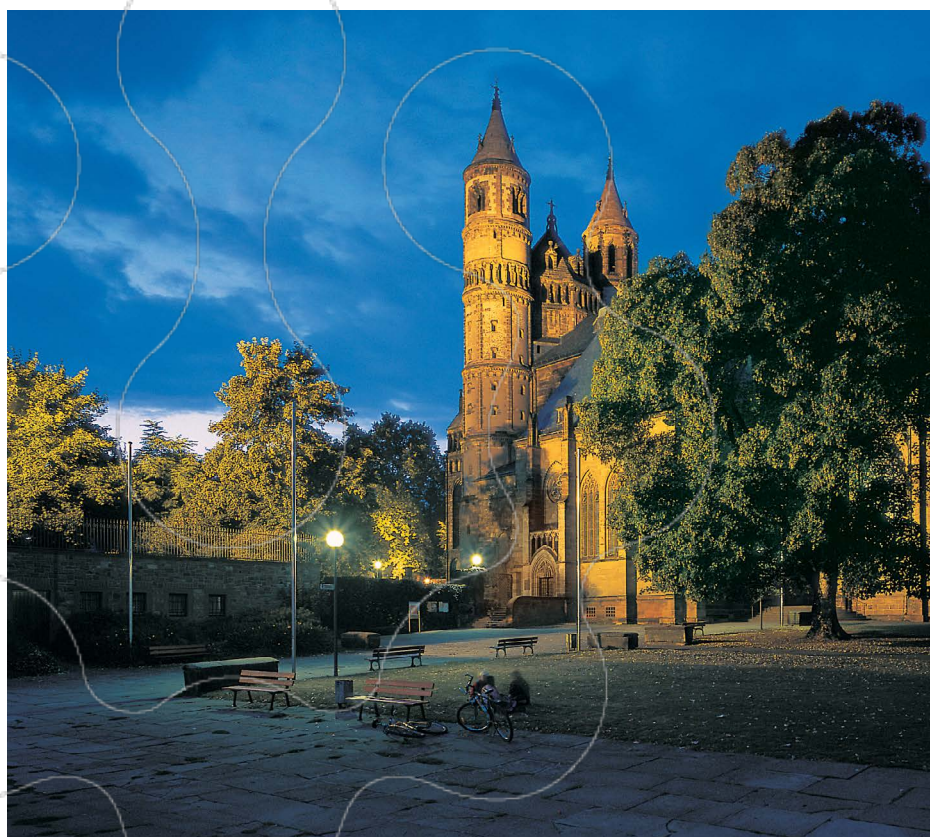
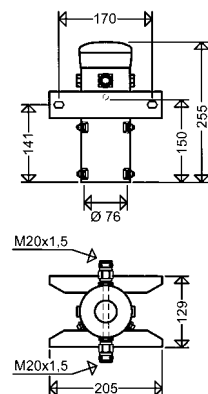
\* see notes

Also available with output reduction (LR) and constant luminous flux function (CL) or combinations of the functions (CL LR / CL LA)

Pole top for single mounting 7700/7800/1 M



Pole top for dual mounting 7700/7800/2 M



## Accessories / Spare Parts

Article no.	Type	
78001 9001	<b>7800/010</b>	spare safety glas
75739 9010	<b>7700/7800/1 M</b>	pole top for single mounting
75739 9011	<b>7700/7800/2 M</b>	pole top for dual mounting
90270 0005	<b>ROB 60/76</b>	pipe clamp for direct pole mounting or on multiple post top adapters
90117 9000	<b>2537</b>	plastic cable gland M25 x 1,5 black
90118 9000	<b>2538</b>	plastic plug M25 x 1,5 black

All pole top brackets made of galvanised steel. Painting in any RAL colour for additional charge.

NEW

## AREALO LED Large-Area Spotlight Series 7850...



### Applications:

Sports facilities and large areas such as Car Parks, stockyards, Loading station, Container terminals, large opencast mining equipment, port facilities, Airport apron lighting, etc.

### Design:

Housing: 1 - 3 Segments of Die-cast aluminium, powder coated in DB702N (mica-iron paint, grey), with LED modules, optics and cover glass.

Rear-mounted ECG-housing of aluminium, powder coated in DB702N.

**Version OV:** without ECG-housing, ECG on separate Pole mounting rail.

**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 asymmetric beam.

**Connection:** Plug-type connector (**FastConnect**), 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:

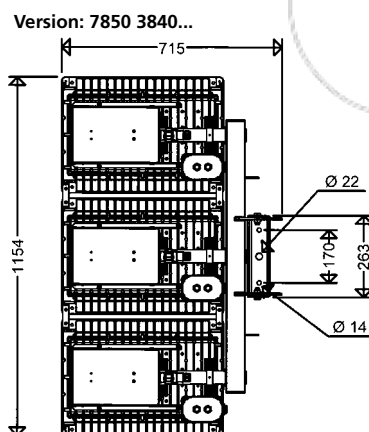
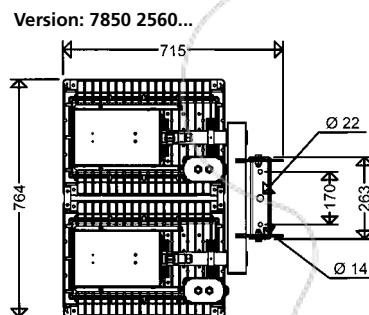
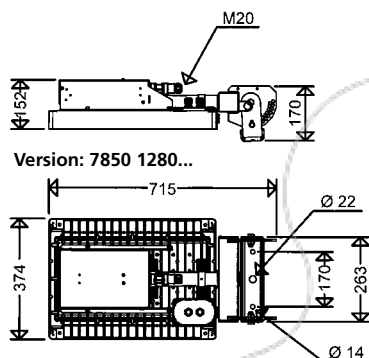
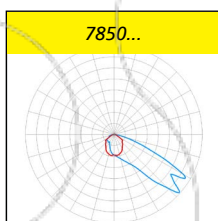
**LED module:** Zhaga compliant, 4,000K,  $R_a > 70$ , lifetime  $L_{90} > 100,000$ h

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

**Note:** Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

### Further Options:

- 3,000 K, light-colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 38% lower luminous flux)
- asymmetric light distributions
- special painting in all RAL colours



### 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 control with highly efficient optics
- uniform illumination through Multi-Layer-Technology, this means each individual LED illuminates the entire area, the LVK of the individual LEDs overlap
- Luminaire can be rotated using a mounting bracket and swiveled by up to 90° in 5° increments, segments can also be rotated to achieve optimal lighting results
- Simple, easy mounting:  
Fasten the mounting bracket with the segment holder, attach and fix the segments individually, establish the electrical connection using the **FastConnect** connector
- Fast ECG exchange with OV version, no supervisor required
- eco friendly with 0° mounting (Plane Surface Floodlight) no light emission in the upper half space, Dark-Sky requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

Article no.	Type	number of segments	Quantity of ECG	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [ca. kg] (without packaging)	Wind load area [m²]
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### 7850... SP

78501 0001	7850 12804SP	1	2	414	50.000	121	A++	18,3	0,16
78502 0001	7850 25604SP	2	4	828	100.000	121	A++	34,0	0,32
78503 0001	7850 38404SP	3	6	1242	150.000	121	A++	50,0	0,48

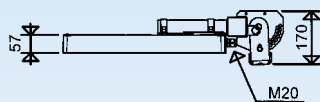
\* see notes

### Notes:

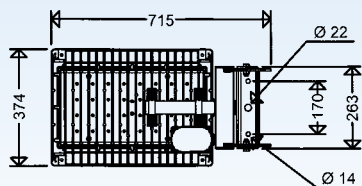
Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

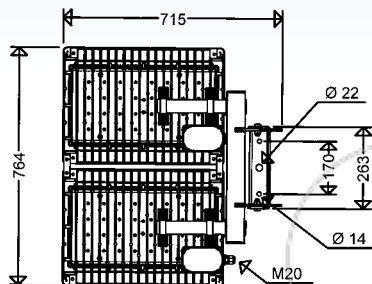




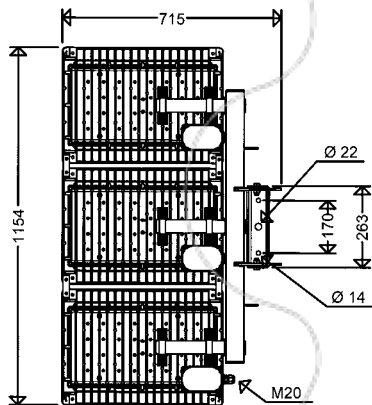
Version: 7850 1280... SP OV



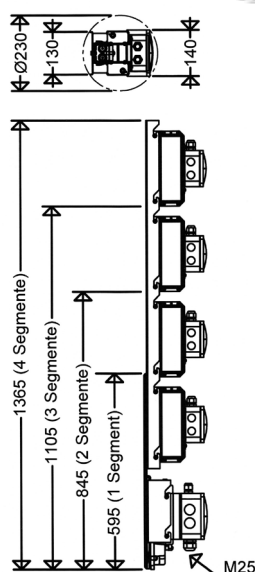
Version: 7850 2560... SP OV



Version: 7850 3840... SP OV



Mast mounting rail



Article no.	Type	number of segments	Quantity of ECG	Power consumption [W]*	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Weight [ca. kg] (without packaging)	Wind load area [m²]
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## 7850... SP OV



### Version:

Like 7850 ... but without ECG housing, mast mounting rail required.

78501 0100	<b>7850 12804SP OV</b>	1	2	414	50.000	121	A++	14,3	0,16
78502 0100	<b>7850 25604SP OV</b>	2	4	828	100.000	121	A++	26,0	0,32
78503 0100	<b>7850 38404SP OV</b>	3	6	1242	150.000	121	A++	38,0	0,48

\* see notes \*\* 44% luminous flux at 50% power consumption

## Mast mounting rail 7850/1 ME 10150

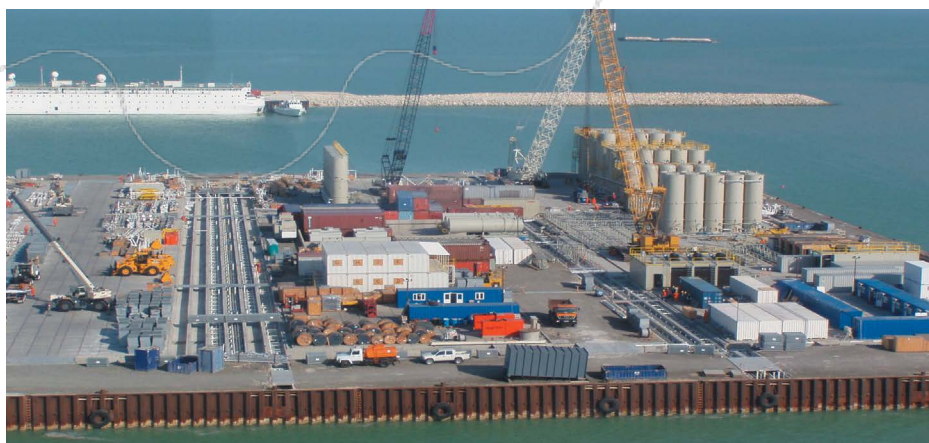
### Design:

Device plate with electronic ballast and cable junction box, wired ready for connection, FastConnect connector.

Tool-free with hanging profile (included in delivery).

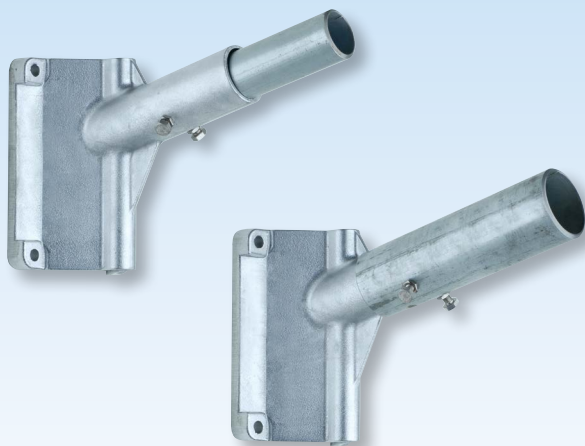
### Mounting:

Article no.	Type	
78509 0001	<b>7850/1 ME 1050</b>	Mast mounting rail for one 1er-segment (2 ECG)
78509 0002	<b>7850/2 ME 1050</b>	Mast mounting rail for one 2er-segment (4 ECG)
78509 0003	<b>7850/3 ME 1050</b>	Mast mounting rail for one 3er-segment (6 ECG)
78509 0004	<b>7850/4 ME 1050</b>	Mast mounting rail for two 2er-segments (8 ECG)



## Accessories / Spare Parts

Article no.	Type	
78510 9000	<b>7850/010</b>	spare safety glas
90120 9011	<b>2530</b>	plastic cable gland M20 x 1,5 black
90121 9008	<b>2600</b>	plastic plug M20 x 1,5 black



## Cast Aluminium Multi-Purpose Pole Arm Carrier Series 4860 – 4864

Application: Series 42, 43, 46, 47, 48, 287

### Applications:

For mounting outdoor light fittings on flat walls and corners of buildings.

### Design:

Aluminium casting: Natural finish, with four fixing holes Ø 10,5mm, and carrier shaft for galvanized steel pole arms.

Pole arm: Ø 42mm (100, 250, or 400mm long), or Ø 60mm (100 or 250mm long), with 2 fixing screws M8

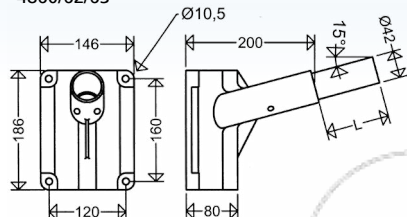
### Pole arm assembly:

The Ø 42mm pole arm is pushed into the carrier shaft, the Ø 60mm pole arm is slipped over the carrier shaft. The pole arm is secured with 2 screws M8 (included in supply).

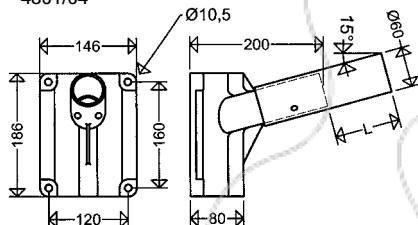
### Options:

Special painting in RAL or DB colours

4860/62/63

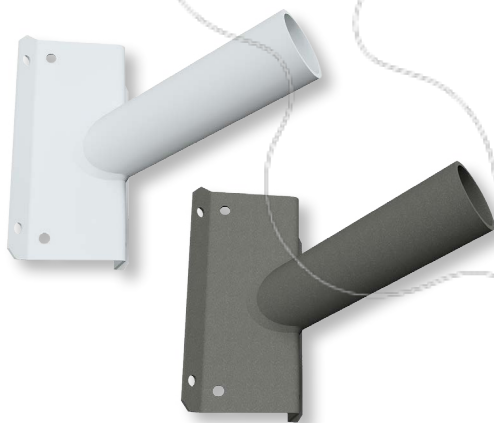


4861/64



## 4860 - 4864

Article no.	Type	D	L	Weight ca. [kg]
48600 0001	4860	42	100	1,4
48600 0002	4861	60	100	1,7
48600 0003	4862	42	250	1,9
48600 0004	4863	42	400	2,3
48600 0005	4864	60	250	2,5



## Welded Aluminium Standard Pole Arm Carrier Series 4870 / 4871

Application: Series 42, 43, 46, 47, 48

### Applications:

For mounting outdoor light fittings on flat walls and corners of buildings.

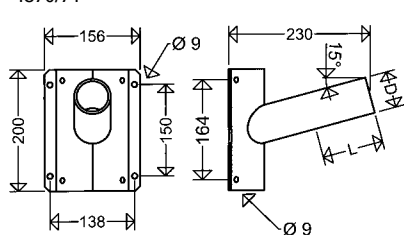
### Design:

Aluminium plate 4 mm thick, powder coated grey (RAL 7035) or mica-iron (DB703), with eight fixing holes Ø 9mm and pole arm Ø 42mm (100mm long) or Ø 60mm (100mm long).

### Options:

Special painting in RAL or DB colours

4870/71



## 4870 / 4871

Article no.	Type	D	L	Weight ca. [kg]
48700 0001	4870	42	100	0,6
48700 0503	4870 DB703	42	100	0,6
48700 0002	4871	60	100	0,7
48700 0504	4871 DB703	60	100	0,7



## Pole-Top Brackets, Reducing Adapters, Tubular and Wall Brackets

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 following light fittings:
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### Pole-top brackets Ø 42mm

60099 0001	<b>600/1</b>	for 1 fitting	3,2	42, 43, 44, 46, 47, 48, 287 (20W)
60099 0002	<b>600/2</b>	for 2 fittings	4,0	
60099 0003	<b>600/3</b>	for 3 fittings	4,8	
60099 0004	<b>600/4</b>	for 4 fittings	5,6	

### Pole-top brackets Ø 60mm

60199 0001	<b>601/1</b>	for 1 fitting	3,7	42, 44, 46, 47, 48 and 7573 with ROB 60/76
60199 0002	<b>601/2</b>	for 2 fittings	5,1	
60199 0003	<b>601/3</b>	for 3 fittings	6,5	
60199 0004	<b>601/4</b>	for 4 fittings	7,9	

### Pole-top brackets Ø 60mm

61099 0001	<b>610/1</b>	for 1 fitting	3,7	44 A, and 7573 with ROB 60/76
61099 0002	<b>610/2</b>	for 2 fittings	5,1	
61099 0003	<b>610/3</b>	for 3 fittings	6,5	
61099 0004	<b>610/4</b>	for 4 fittings	7,9	

### Reducers

60399 0001	<b>603 (60/42)</b>	1	2,4	42,43,47,48,46
60499 0001	<b>604 (60/42)</b>	2	4,0	287 12L...
60599 0001	<b>605 (60/42)</b>	3	3,5	287 06L...
60699 0001	<b>606 (48/42)</b>	4	2,8	42,43,47,48,46
60799 0001	<b>607 (60/42)</b>	5	1,6	42,43,47,48,46

### Round arch pole-top adapter

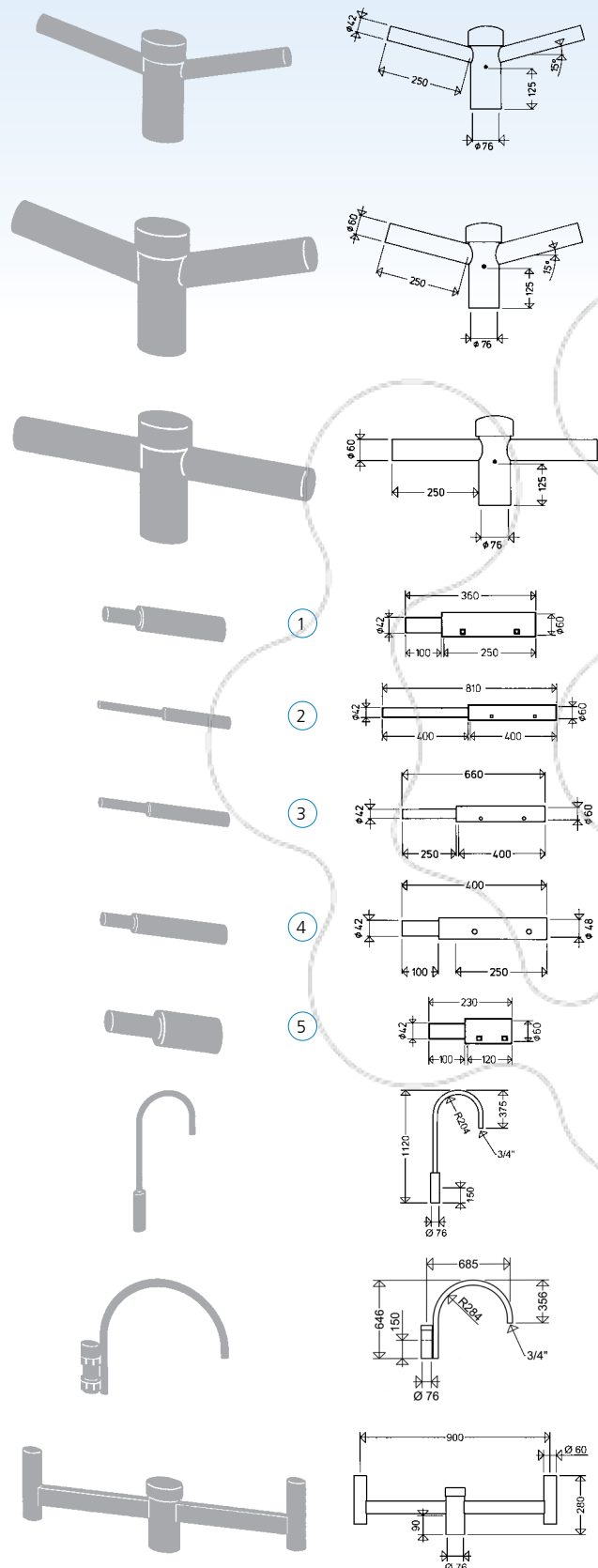
61999 0001	<b>619/1</b>		8,8	564, 565
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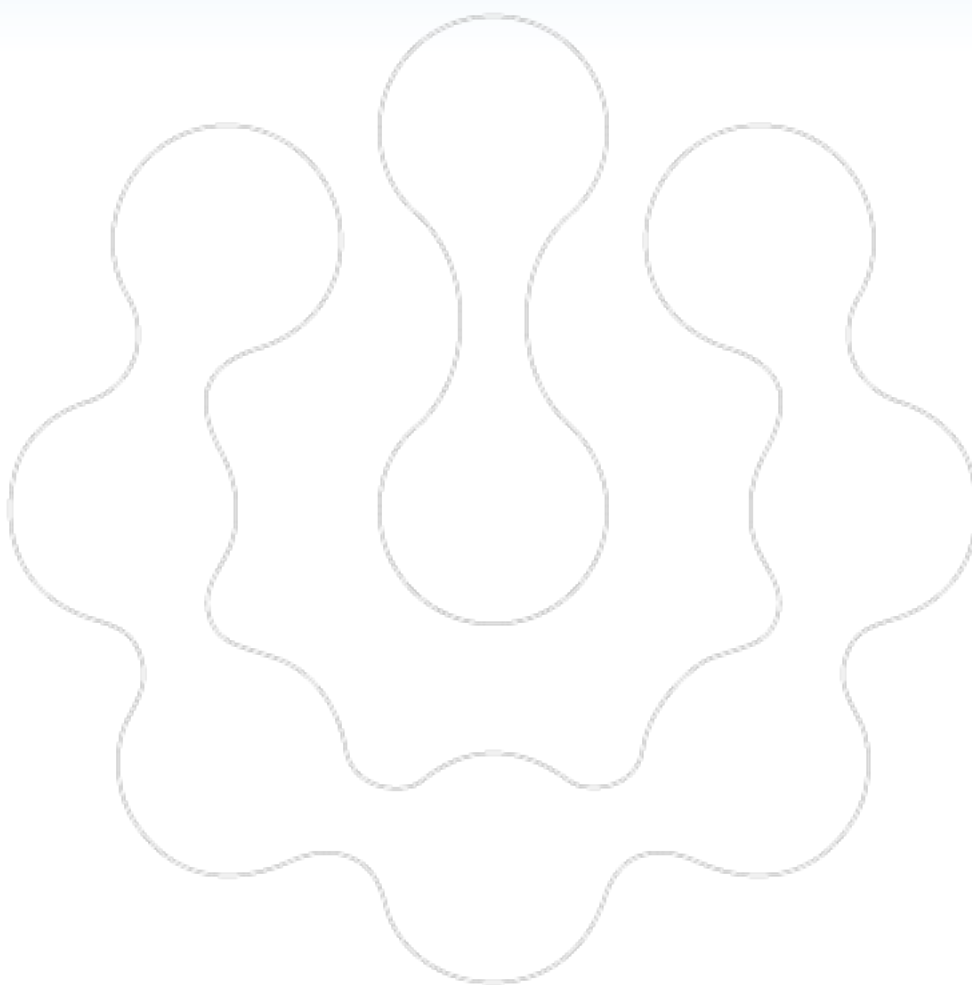
### Pole-top

62299 0001	<b>622/1</b>	for 1 fitting	7,2	564, 565
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### Pole-top

62599 0001	<b>625/1</b>	for 1 fitting	4,6	541, 542, 543, 553, 556, 557, 544, (with RZ 1), 43, 53, 44, 46, 47, 48
62599 0002	<b>625/2</b>	for 2 fittings	7,0	







# 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.

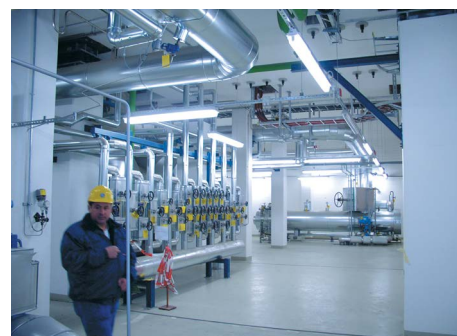
### WIDE RANGE OF PRODUCTS, INCLUDING SPECIAL SOLUTIONS.

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.



## LED-TECHNOLOGY

LED light fittings are meanwhile a standard solution with regard to indication and illumination of escape routes. Pictogram illumination that complies with the standards can be done with a minimum supply power.

By applying relevant optics, escape route light fittings may be installed at longer distances between the light points. This allows reducing cost without compromising safety.

SCHUCH is a qualified partner having over 10 years of experience in emergency LED light fitting production.

### 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. This program area is therefore being massively expanded.

NEW

Product	Series	Page
<b>Light Fittings with diffuser</b>		
<b>Series 161...</b>	<b>161...</b>	<b>166</b>
• with self-contained battery and automatic self-monitoring	... MA	167
• for central battery systems	... ZB	167
• for high ambient temperatures up to +50°C	... H50 MA	168
<b>Series 163... Generation 2</b>	<b>163 G2</b>	<b>169</b>
• with self-contained battery and automatic self-monitoring	... G2 MA	170
• for central battery systems	... G2 ZB	170a
<b>LUXANO 2</b>	<b>167... G2 ZB</b>	<b>170a</b>
<b>Series 164 KL...</b>	<b>164 KL...</b>	<b>171</b>
<i>small polyester light fittings</i>		
• with self-contained battery and automatic self-monitoring	... MA	171
• for central battery systems	... ZB	172
<b>Series 131...</b>	<b>131...</b>	<b>173</b>
<i>small PC-light fittings</i>		
• with self-contained battery and automatic self-monitoring	... W MA	174
• for central battery systems	... ZB	174
<b>Series 3611...</b>	<b>3611...</b>	<b>175</b>
<i>small die-cast aluminium light fittings</i>		
• with self-contained battery and automatic self-monitoring	... MA	175
• for central battery systems	... ZB	176
<b>Group or central battery systems</b>		
We recommend the use of systems of the make of INOTEC. Other makes upon request		
<b>Note</b>		
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.		



Foto: BASF





## 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:** Line modules 4.000K,  $R_a > 80$ , life of operation  $L_{80} > 50.000h$  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.

**Connection voltage:** 220-240V 50/60Hz

**Ambient temperature:** -5°C up to +30°C (maintained operation)

### Options:

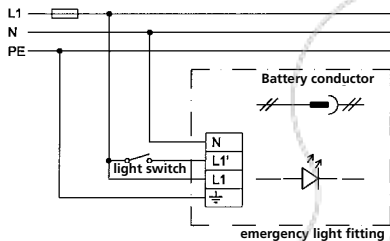
- 6.500K
- for higher ambient temperatures
- according to „International Featured Standard Food“ (IFS)
- for application in food industrie (LM)
- PC-diffuser frosted (PC)
- stainless steel clips (KE)
- dimmable, DALI-interface (DIMD)

### For versions with self-contained battery:

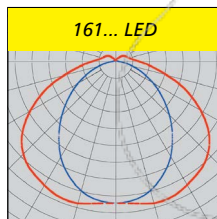
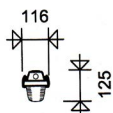
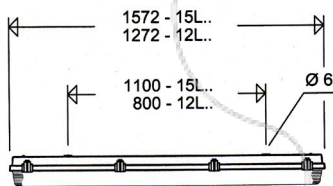
- Emergency electronic with DALI interface for central monitoring (MA-Z)
- Through-wiring
- 4-conductor: L1, L1', N, PE or
- 6-conductor: L1, L1', L2', L3', N, PE

### For versions with central battery sytem:

- with reduced luminous flux in DC-Mode (e. g.: 15%, 50% etc.)
- with separate module for monitoring individual light fittings



**Installation:** connect battery conductor  
**Decommission:** disconnect battery conductor



### 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  $R_a > 80$** , according to the workplace guide lines suitable for nearly all plant locations
- **reliable protection against contact** due to additional clear cover (MA-versions)
- ECG and reflector with LED modules may be replaced by qualified personal on-site
- **future proof** by using LED-modules according to Zhaga standard

### Notes:

**Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.**

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] * (incl. battery charge)	Luminous flux [lm] *	Luminous flux [lm] * (emergency operation)	Luminous efficacy [lm/W]	Operating time 1h	Operating time 3h	Energy efficiency class	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	•		A++	1 x 36W	3,1
16118 0332	161 15L34/1 MA	23	3.440	940	150	•		A++	1 x 58W	3,8
16118 0333	161 12L42/1 MA	29	4.240	890	146	•		A++	2 x 36W	3,1
16118 0334	161 15L60/1 MA	41	6.160	940	150	•		A++	2 x 58W	3,8
16118 0341	161 12L22/3 MA	18	2.390	890	133	•	•	A++	1 x 36W	3,5
16118 0342	161 15L34/3 MA	24	3.440	940	143	•	•	A++	1 x 58W	4,2
16118 0343	161 12L42/3 MA	30	4.240	890	141	•	•	A++	2 x 36W	3,5
16118 0344	161 15L60/3 MA	42	6.160	940	147	•	•	A++	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 selective cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.

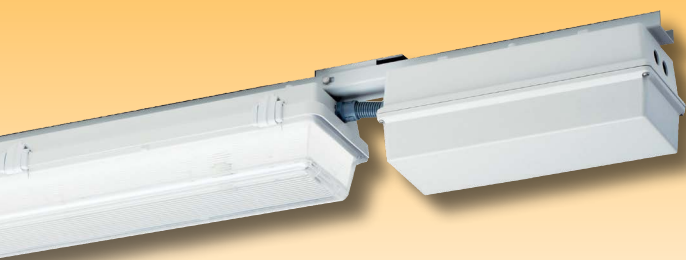
Connection voltage: 220-240V, 50/60Hz and 220V DC

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			A++	1 x 36W	2,6
16118 0103	161 15L34 ZB	21	3.440	3.440	164			A++	1 x 58W	3,0
16118 0049	161 12L42 ZB	27	4.240	4.240	157			A++	2 x 36W	2,6
16118 0048	161 15L60 ZB	39	6.160	6.160	158			A++	2 x 58W	3,0
16118 0083	161 12L60 ZB	39	5.920	5.920	152			A++	2 x 58W	2,6
16118 0063	161 15L75 ZB	49	7.440	7.440	152			A++	> 2 x 58W	3,0

\* see notes \*\* 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 Light Fitting with Diffuser for high ambient temperatures up to +50°C Series 161... H50

### Applications:

In humid, wet and dusty locations with high ambient temperatures for illuminating escape routes.

### Mechanical:

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

**Diffuser:** Injected, acrylic glass, frosted.

**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.

**Emergency light components** installed in a separate glass fibre reinforced polyester box (BR 10150) which is mounted to a carrier rail together with the light fitting as one unit.

**Connection:** 6-pole terminal for one-sided loop-in/loop-out wiring with 2 plastic cable glands M20 x 1,5

**Mounting:** Direct ceiling or wall mount or rope/chain mount with eye bolts or hooks.

### Technical Data:

**LED:** Line modules 4.000K,  $R_a > 80$ , life of operation  $L_{80} > 50.000h$  at max. ambient temperature. (see notes)

**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:

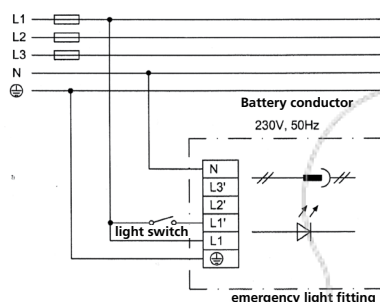
**maintained operation** = switching over to battery operation in case of mains failure, linear modules will be operated with reduced luminous flux as emergency lighting.

**Connection voltage:** 220-240V, 50/60Hz

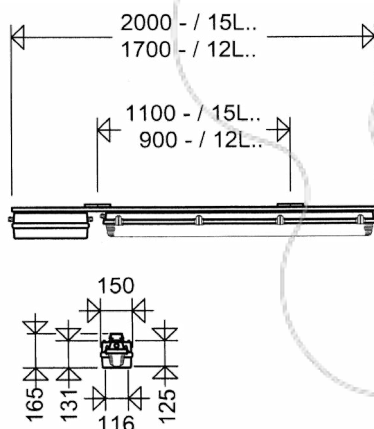
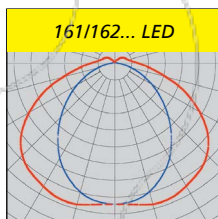
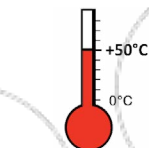
**Ambient temperature:** 0°C up to +50°C (maintained operation)

### Options:

- 6.500K
- according to „International Featured Standard Food“ (IFS)
- for application in food industrie (LM)
- PC-diffuser frosted (PC)
- Emergency electronic with DALI interface for central monitoring (MA-Z)



Installation: connect battery conductor  
Decommission: disconnect battery conductor



### Product highlights:

- robust, high quality light fitting with outstanding mechanical strength, for rough industrial use
- always ready for operation due to permanent trickle charge of the battery
- safety in case of emergency, instant light with maximum light output
- homogeneous illumination by using frosted diffusers, no particular 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
- ECG and reflector with LED modules may be replaced by qualified personal (no throw-away light fitting)
- future proof by using standardized LED-modules (Zahga)

Article no.	Type	Power consumption [W]* (incl. battery charge)	Luminous flux [lm]*	Luminous flux [lm]* (emergency operation)	Luminous efficacy [lm/W]	Operating hours 1h	Operating hours 3h	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## 161 ..L../. H50 MA



### with self-contained battery and automatic self-monitoring

16121 0001	161 12L22/1 H50 MA	17	2390	890	141	•		A++	1 x 36W	8,0
16121 0002	161 15L34/1 H50 MA	23	3440	940	150	•		A++	1 x 58W	8,9
16121 0007	161 12L42/1 H50 MA	29	4240	890	146	•		A++	2 x 36W	8,0
16121 0008	161 15L60/1 H50 MA	41	6160	940	150	•		A++	2 x 58W	8,9
16121 0003	161 12L22/3 H50 MA	18	2390	890	133	•	•	A++	1 x 36W	8,0
16121 0004	161 15L34/3 H50 MA	24	3440	940	143	•	•	A++	1 x 58W	8,9
16121 0009	161 12L42/3 H50 MA	30	4240	890	141	•	•	A++	2 x 36W	8,0
16121 0010	161 15L60/3 H50 MA	42	6160	940	147	•	•	A++	2 x 58W	8,9

\* see notes \*\* 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... L.“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

## Dustproof/Waterproof LED Emergency Light Fitting with Diffuser Series 163 .. Generation 2

### 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:** Line modules 4.000K,  $R_a > 80$ , life of operation  $L_{80} > 50.000h$  at max. ambient temperature (see notes)

**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:** -5°C up to +30°C (maintained operation)

### Options:

- 6.500 K
- according to „International Featured Standard Food“ (IFS)
- PC-diffuser stippled clear (PC)
- stainless steel clips (KE)
- dimmable, DALI-interface (DIMD)

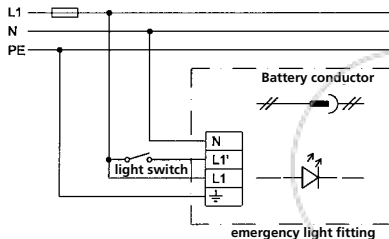
### For versions with self-contained battery:

- Emergency electronic with DALI interface for central monitoring (MA-Z)

- through-wiring
- 4-conductor: L1, L1', N, PE or
- 6-conductor: L1, L1', L2', L3', N, PE

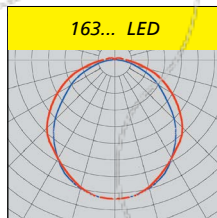
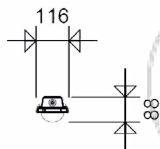
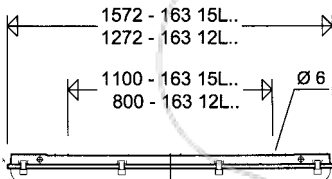
### For versions with central battery system:

- with reduced luminous flux in DC mode (e. g. 15%, 50% etc.)
- with separate module for monitoring individual light fittings



**Installation:** connect battery conductor

**Decommission:** disconnect battery conductor



### 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)
- ECG and reflector with LED-modules can be replaced by qualified personnel on-site (no throw-away light fitting)
- future proof by using LED-modules according to Zhaga standard

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption [W] * (incl. battery charge)	Luminous flux [lm] *	Luminous flux [lm] * (emergency operation)	Luminous efficacy [lm/W]	Operating time 1h	Operating time 3h	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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## 163 ..G2/. MA



with self-contained battery and automatic self-monitoring

16307 0031	<b>163 12L22G2/1 MA</b>	17	2.320	810	137	•		A++	1 x 36W	2,6
16307 0032	<b>163 15L34G2/1 MA</b>	23	3.330	830	145	•		A++	1 x 58W	3,0
16307 0033	<b>163 12L42G2/1 MA</b>	29	4.110	810	142	•		A++	2 x 36W	2,6
16307 0034	<b>163 15L60G2/1 MA</b>	41	5.970	830	146	•		A++	2 x 58W	3,0
16307 0035	<b>163 15L34G2/3 MA</b>	24	3.330	830	139	•	•	A++	1 x 58W	3,4
16307 0036	<b>163 15L60G2/3 MA</b>	42	5.970	830	142	•	•	A++	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 selective 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	<b>163 12L22G2 ZB</b>	17	2.470	2.470	145			A++	1 x 36W	2,2
16307 0122	<b>163 15L34G2 ZB</b>	22	3.370	3.370	153			A++	1 x 58W	2,8
16307 0123	<b>163 12L42G2 ZB</b>	28	4.160	4.160	149			A++	2 x 36W	2,2
16307 0124	<b>163 15L60G2 ZB</b>	40	6.090	6.090	152			A++	2 x 58W	2,8

\* see notes \*\* 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.

NEW

# LUXANO 2

## Dustproof/Waterproof LED Emergency Light Fitting with Diffuser Series 167 ... G2 ZB

### Applications:

In humid, wet and dusty indoor areas connected to group- or central battery systems

### Design:

**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, with incorporated fuse for selective cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.

**Cable entries:** Variable, closed knock-outs on the short and long sides, and on the top, 2 blanking plugs M20.

**Mounting system:** 2 retaining clips made of stainless steel, 2 bracket for chain suspension (part of the delivery)

### 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)!

### Technical data:

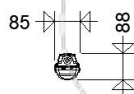
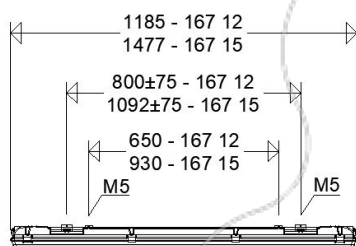
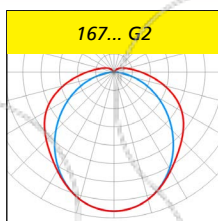
**ECG:** 220-240V, 50/60Hz and 220V DC

**LED:** Linear modules 4,000K, CRI > 80, life time L<sub>80</sub> > 50,000h at max. ambient temperature (see notes)

**Ambient temperature:** -20°C up to +35°C

### Options:

- through wiring
- according to „International Featured Standard Food“ (IFS)
- for application in unprotected outdoor areas (AUS)
- quick-connector „Fast Connect“ (FC)



### Product highlights:

- quality product with high-quality components from well-known manufacturers
- homogeneous illumination by using frosted diffusers, no individual light spots visible, comfortable perception of light and excellent glare limitation
- 100% luminous flux in the emergency operation
- "D"-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 back
- FastFix quick-action mounting system, with retaining clips made of stainless steel for variable mounting distances, without opening the fitting.
- no throw-away light fitting - resource-saving and environmentally friendly



Article no.	Type	Power consumption [W] **	Luminous flux [lm] **	Luminous efficacy [lm/W] *	Energy efficiency class	Substitute for *	Weight [kg] without packing material
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### 167... G2

16703 0002	167 15L34G2 ZB	28	3.850	138	A++	1 x 58W	2,0
16703 0003	167 12L42G2 ZB	30	4.100	137	A++	2 x 36W	1,7
16703 0004	167 15L60G2 ZB	43	6.000	140	A++	2 x 58W	2,0

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

\*\* see notes

## Accessories / Spare Parts

Article no.	Type	
<b>spare glasses, PMMA, frosted</b>		
16711 9003	167 036G2	PMMA for 167 12L... G2
16711 9004	167 058G2	PMMA for 167 15L... G2
<b>Fasteners</b>		
90123 9008	167G2 KE V10	stainless steel (packing unit 10)
<b>Cable entries</b>		
90063 9000	2511	blanking plug M20
<b>Accessories</b>		
90049 0004	167 VBC P	retaining clips, reinforced for horizontal wall mount (1 pair)

### Notes:

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

■ See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



## 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 ordered 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),  $R_a > 80$ , life expectancy  $L_{80} > 50.000h$  at max. ambient temperature (see notes)

**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 Mode:** LED modules will switch on if mains fails.

**Operating voltage:** 220-240V; 50/60Hz

**Ambient temperature:** -5 to +30°C in maintained mode  
-0 to +40°C in stand-by mode

### Options:

- stainless steel clips (KE)
- Cable entries to M25x1.5
- same side in/out wiring

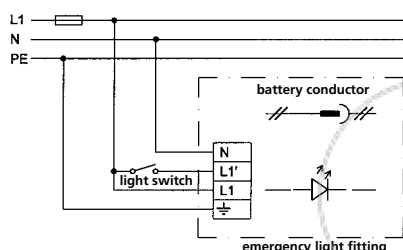
### For series with self-contained battery:

- Emergency electronic with DALI interface for central monitoring (MA-Z)

### 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.

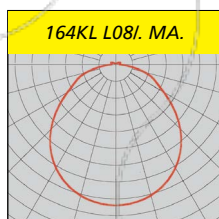
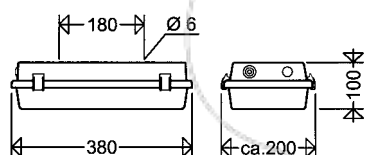
### Wiring diagram maintained/stand by operation



**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 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
- components are replaceable by qualified personnel on-site (no throw-away light fitting)
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Power consumption [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	Energy efficiency class	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	•	•	•	A++	---	1,1
16408 0061	164KL L02/3 W MA	5,0	270	270	54	•	•	•	A++	---	1,6
16408 0041	164KL L08G2/1 MA	10,0	820	500	82	•	•	•	A++	1 x 11W	1,3
16408 0042	164KL L08G2/3 MA	11,0	820	490	75	•	•	•	A++	1 x 11W	1,7

\* see notes

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

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [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	Energy efficiency class	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 selective 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	<b>164KL L02 W ZB</b>	4,0	270	270	68	•			A++	---	0,9
16408 0031	<b>164KL L05G2 ZB</b>	4,5	490	490	109				A++	1 x 8W	1,0
16408 0032	<b>164KL L08G2 ZB</b>	8,5	840	840	99				A++	1 x 11W	1,0
16408 0033	<b>164KL L11G2 ZB</b>	10,0	1.150	1.150	115				A++	1 x 18W	1,0
16408 0034	<b>164KL L15G2 ZB</b>	14,0	1.490	1.490	106				A++	1 x 24W	1,0

\* see notes

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

#### Self-adhesive pictogram green/transparent<sup>1)</sup>



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	
<b>Spare glasses</b>		
16413 9001	<b>164000 W</b>	PMMA white opalescent for 164KL... W
16413 9007	<b>164000 F G2</b>	PMMA frosted for 164KL L.. G2
<b>Brackets</b>		
90232 0004	<b>DA</b>	ceiling bracket
<b>Self-adhesive pictograms</b>		
12112 0025	<b>121/32</b>	emergency EXIT „up“
12112 0026	<b>121/33</b>	emergency EXIT „left“
12112 0027	<b>121/34</b>	emergency EXIT „right“
12112 0028	<b>121/35</b>	emergency EXIT „below“
12112 0029	<b>121/36</b>	emergency EXIT „up-left“
12112 0030	<b>121/37</b>	emergency EXIT „up-right“
12112 0031	<b>121/38</b>	emergency EXIT „down-left“
12112 0032	<b>121/39</b>	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),  $R_a > 80$ , life expectancy  $L_{80} > 50.000h$  at max. ambient temperature (see notes).

**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 case of mains failure.

**Connection voltage:** 220-240V, 50/60Hz

Ambient temperatures: -5°C up to +30°C for maintained version  
0°C up to +40°C for stand-by version

### Options:

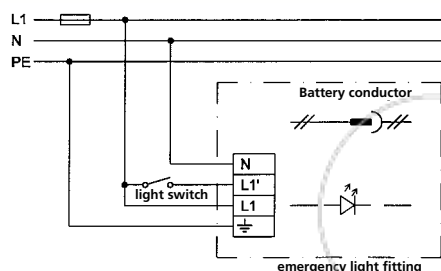
#### For series with self-contained battery:

– Emergency electronic with DALI interface for central monitoring (MA-Z)

#### 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.

### Wiring diagram maintained/stand by operation

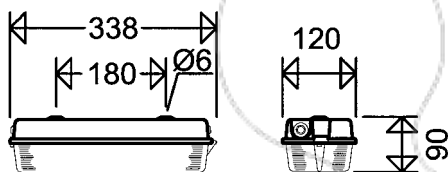


**Installation:** connect battery conductor

**Decommission:** disconnect battery conductor

**Stand-by operation:** do not connect L1'

### series 131...



### 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
- components are replaceable by qualified personnel on-site (no throw-away light fitting)
- future proof by using LED-modules according to Zhaga standard

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).



Article no.	Type	Power consumption * with battery charge [W]	Luminous flux * [lm]	Luminous flux * (mains/ emergency) [lm]	Luminous efficacy [lm/W]	light fitting for pictogram	Operating time 1h	Operating time 3h	Energy efficiency class	Substitute for ca. **	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	•	•		A++	---	1,0
13112 0031	131 L02/3 W MA	5,0	240	240	48	•		•	A++	---	1,2
13112 0110	131 L03/1 MA	5,0	300	300	60		•		A++	1 x 8W	1,0
13112 0111	131 L03/3 MA	5,0	300	300	60			•	A++	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 selective 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	•			A++	---	0,4
13112 0011	131 L04 ZB	4,0	460	460	115				A++	1 x 8W	0,5
13112 0012	131 L07 ZB	8,0	780	780	98				A++	1 x 11W	0,5
13112 0013	131 L10 ZB	10,0	1.050	1.050	105				A++	1 x 18W	0,5
13112 0014	131 L13 ZB	13,0	1.370	1.370	105				A++	2 x 11W	0,5

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

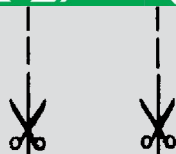


Series 131... W LED with pictogram

### 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	
<b>Spare glasses</b>		
13111 9001	131000W	PC opalescent white for 131... W
13111 9006	131000F	PC frosted for 131 L...
<b>Standard pictogram, self-adhesive</b>		
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),  $R_a > 80$ , life expectancy  $L_{80} > 50.000h$  at max. ambient temperature (see notes).

**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:** -5°C up to +30°C in stand-by operation  
0°C up to +40°C in maintained operation

### Options:

– same side in/out wiring

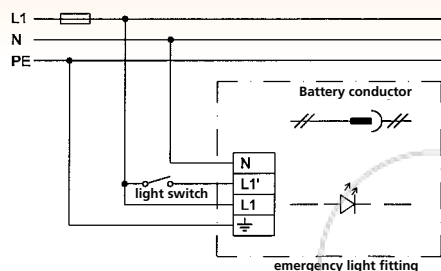
### For series with self-contained battery:

– Emergency electronic with DALI interface for central monitoring (MA-Z)

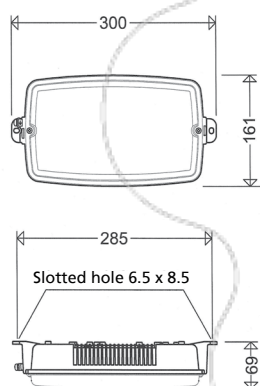
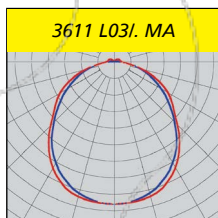
### For series in case of connection to a central power supply unit:

– 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 IF5 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
- easy to install due to external mounting lugs
- components are replaceable by qualified personnel on-site (no throw-away light fitting)
- future proof by using LED-modules according to Zhaga standard

Article no.	Type	Power consumption [W] * (incl. battery charge)	Luminous flux [lm] *	Luminous flux [lm] * (emergency mode)	Luminous efficacy [lm/W]	Suitable for pictogram	1h operating time	3h operating time	Energy efficiency class	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	•	•		A++	1,0
36111 0051	3611 L02/3 W MA	5,0	170	170	34	•		•	A++	1,2
36111 0033	3611 L03/1 MA	5,0	290	290	58		•		A++	1,0
36111 0034	3611 L03/3 MA	5,0	290	290	58			•	A++	1,2

\* see notes.

### Notes:

Properties, limitations and details for controlling LED-light fittings: See „Technical Supplement“.

All technical data is relevant at the time of print.  
Actual technical data can be found in the internet under [www.schuch.de](http://www.schuch.de).

Article no.	Type	Power consumption [W] * (incl. battery charge)	Luminous flux [lm] *	Luminous flux [lm] * (emergency mode)	Luminous efficacy [lm/W]	Suitable for pictogram	1h operating time	3h operating time	Energy efficiency class	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:

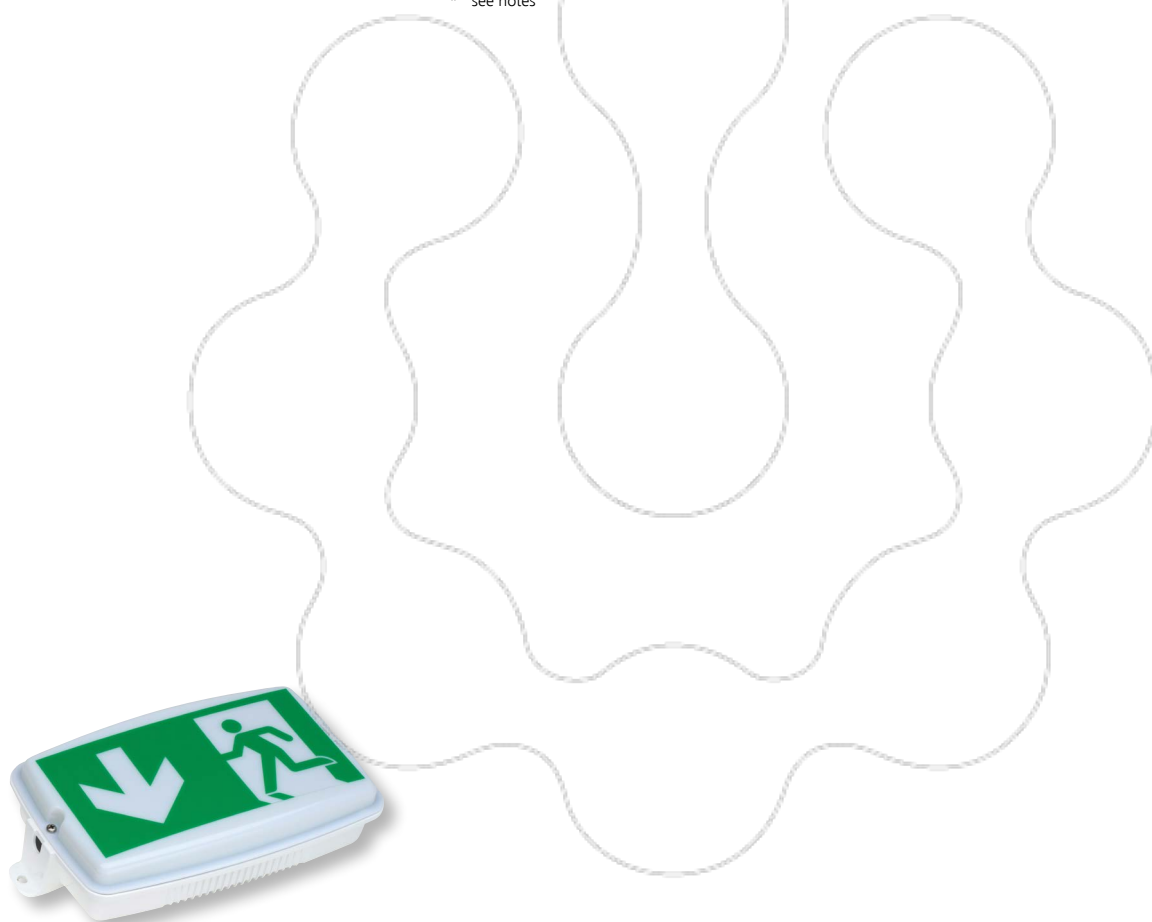
Light fitting with incorporated fuse for selective cut-off in case of failure according to DIN EN 60598-2-22, section 22.7.3.

Connection voltage: 220-240V, 50/60Hz and 220V DC

Ambient temperature: -20°C to +30°C

36111 0030	<b>3611 L02 W ZB</b>	4,0	170	170	43	•			A++	0,9
36111 0035	<b>3611 L05 ZB</b>	6,0	660	660	110				A++	0,9
36111 0036	<b>3611 L10 ZB</b>	10,0	1.180	1.180	118				A++	0,9

\* see notes



Type 3611 ... with pictogram

#### Self-adhesive pictogram



220/110/33 .../34 .../35

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

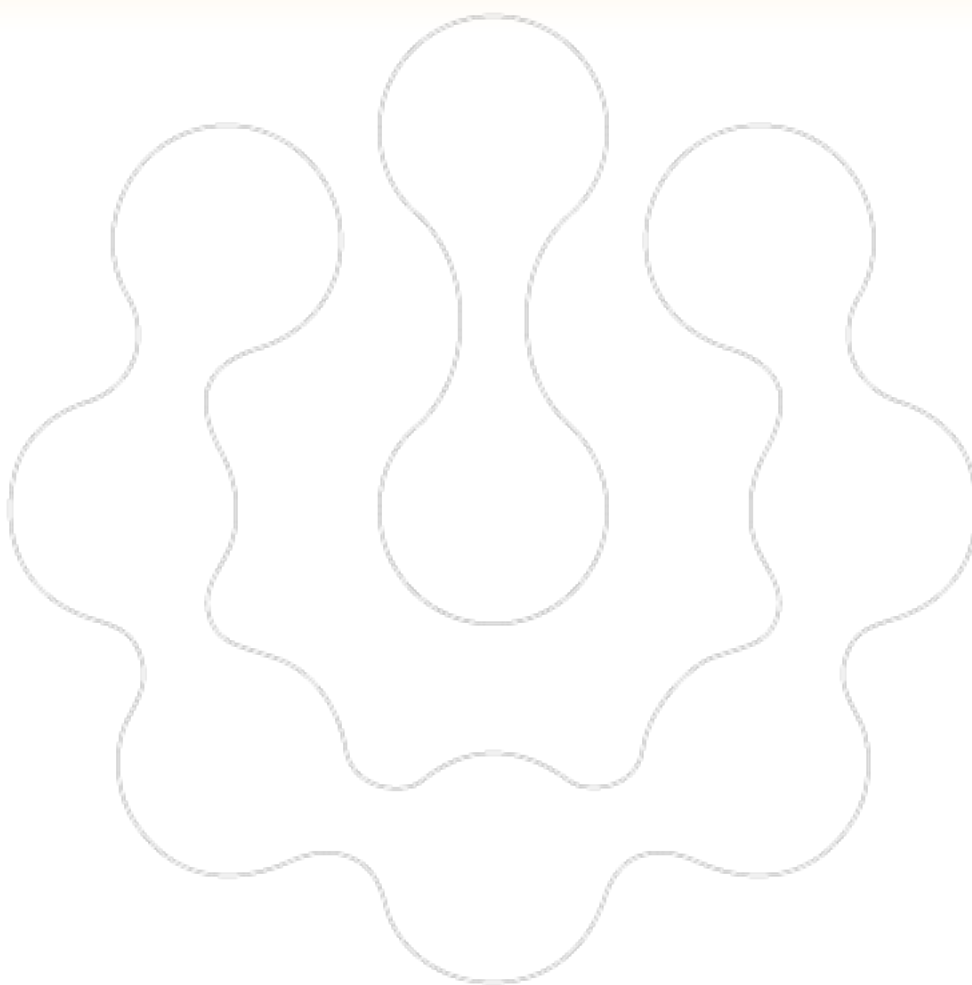
Viewing distance = 22m.

## Accessories / Spare Parts

Article No.	Type	
<b>spare diffusers</b>		
36004 9003	<b>3611/03</b>	PC, frosted
36004 9002	<b>3611/02</b>	PC, white opalescent
<b>Self adhesive legends</b>		
12112 0101	<b>220/110/33</b>	Emergency exit to the left
12112 0102	<b>220/110/34</b>	Emergency exit to the right
12112 0103	<b>220/110/35</b>	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.





## Zone Classification

(acc. to the standards 1999/92/EG)

Hazardous areas are classified into the following zones in accordance with the probability of the existence of an explosive atmosphere:

### Gases, vapours or mists

**Zone 0** An area in which an explosive atmosphere is present either or over long periods 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 time 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 a long time 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 time as a cloud of combustible dust in the air.

## ATEX Equipment

### Temperature classes acc. to IEC 60079-0

An important parameter for the subdivision of the gases is the ignition temperature.

The ignition temperature is the lowest surface temperature value which ignites an explosive atmosphere. The maximum surface temperature must always be lower than the ignition temperatures of the gas-air or vapour-air mixture in which the product is applied.

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

## Classification of Gases and Vapours into Explosion Groups and Temperature Classes

Explosion group	Classification of gases and vapours into temperature classes					
	T1	T2	T3	T4	T5	T6
IIA	Acetone	i-amyl acetate	Gasoline	Acetaldehyde	-	
	Ethane	n-butane	Diesel fuel			
	Ethyl acetate	n-butyl	Aviation fuel			
	Ammonia	alcohol	Heating oils			
	Ethyl chloride	Cyclohexane	n-hexane			
	Benzol	1,2-dichloroethane				
	Acetic acid	Acetic anhydride				
	Carbon monoxide					
	Methanol					
	Methyl chloride					
	Naphthalene					
	Phenol					
	Propane					
	Toluol					
IIB	Town gas	Ethylene Ethyl alcohol	Hydrogen sulphide	Ethyl ether	-	
IIC	Hydrogen	Acetylene			-	Carbon disphide
I	Methane					

## Catagories of appliances

Acc. to the ATEX standards (94/9/EG) the appliances for application in their relative zones are classified into catagories. Similar to the different zones there are three different catagories for group II of the equipment. Consequently, the explosion protected products can be allocated to the ex-zones existing in the production area.

**Catagory 1** comprises appliances which have been designed in such a way that they may be operated in compliance with the characteristic sizes given by the manufacturer and which ensure a high degree of safety. Appliances of this catagory may be used in ZONES 0 and 20 as per their certification.

**Catagory 2** comprises appliances which have been designed in such a way that they may be operated in compliance with the characteristic sizes given by the manufacturer and which ensure a high degree of safety. Appliances of this catagory may be used in ZONES 1 and 21 as per their certification.

**Catagory 3** comprises appliances which have been designed in such a way that they can be operated in compliance with the characteristic sizes given by the manufacturer and which ensure a standard level of safety. Appliances of this catagory may be used in ZONES 1 and 21 as per their certification.

Appliances of this category may be used in ZONES 2 and 22 as per their certification. DIN EN 61241-14 make a difference between conductive and non-conductive dusts. For conductive dusts of ZONE 22 appliances of catagory 2 D must be used.
























## Modes of Protection

### according to European/IEC Standards

In areas where explosive atmospheres may occur despite the explosion protection measures employed, only explosion protected electrical equipment must be used.

<b>EN 60079-7</b>	- stands for: „Increased safety“	- code: „e“
<b>EN 60079-1</b>	- stands for: „Flameproof enclosure“	- code: „d“
<b>EN 60079-5</b>	- stands for: „Sand filling“	- code: „q“
<b>EN 60079-2</b>	- stands for: „Pressurised apparatus“	- code: „p“
<b>EN 60079-11</b>	- stands for: „Intrinsic safety“	- code: „i“
<b>EN 60079-18</b>	- stands for: „Moulding“	- code: „m“
<b>EN 60079-15</b>	- stands for: „Zone 2“	- code: „n“
<b>EN 60079-28</b>	- stands for: „Limitation of optical radiation“	- code: „op is“
<b>EN 60079-31</b>	- stands for: „Protection by enclosure“	- code: „t“

## Table of ingress protection

	1 <sup>st</sup> CHARACTERISTIC NUMERAL	2 <sup>nd</sup> CHARACTERISTIC NUMERAL	Symbol
RA- TING	PROTECTION AGAINST FOREIGN BODIES	PROTECTION AGAINST HARMFUL ENTRY OF WATER	
<b>IP 20</b>	solid objects > 12 mm	non-protected	
<b>IP 23</b>	solid objects > 12 mm	protected against spraying water	
<b>IP 40</b>	solid objects > 1 mm	non-protected	
<b>IP 43</b>	solid objects > 1 mm	protected against spraying water	
<b>IP 44</b>	solid objects > 1 mm	protected against splashing water	
<b>IP 54</b>	dust protected	protected against spraying water	 
<b>IP 55</b>	dust protected	protected against water jets	  
<b>IP 65</b>	dust tight	protected against water jets	  
<b>IP 66</b>	dust tight	protected against heavy seas	  
<b>IP 67</b>	dust tight	protected against effects of immersion in water between 15cm and 1m for 30 minutes	  
<b>IP 68</b>	dust tight	protected against effects of immersion in water under pressure for long periods	  
<b>IPx9k</b>	dust tight	protected against effects of high pressure water jets	  

## Plastics in SCHUCH luminaires

### Plastics in SCHUCH luminaires

The bodies of most SCHUCH luminaires are made of glass fibre reinforced polyester. This material is heat resistant, mechanically stable, electrically insulating, weather-resistant and chemically resistant.

The covers of the luminaires is made of the following materials: silicate glass, polycarbonate(PC) or polymethyl methacrylate (PMMA).

Based on the current state of the art and the information provided by the respective material manufacturers, the following table shows the resistance of PMMA and

PC against various chemicals. Experience shows that the temperature of chemical (aggression) substances often plays a significant role.

Parts made of PC are impact resistant and more resistant to heat than parts made of PMMA. PC is not resistant against all chemical agents. For cleaning, we recommend warm water with a mild detergent. Subsequently the material should be thoroughly rinsed with clean water. The PH value must be less than 7.5.

Due to this no soap or similar must be used.

Material	Poly- methylacrylat (PMMA)	Polycarbonat (PC)	Thermoplastic polyester (PBT)
Acetone	–	–	–
Ethylalcohol (to 30 %)	o	o 96% <sup>1)</sup>	+
Battery acid	+	+	k.A.
Ammoniac	+	–	+ up to 10% <sup>1)</sup>
Boric acid 3 %	+	+	k.A.
Sodium Hypochlorite	+	–	k.A.
Chlorine (moist)	–	–	k.A.
Chromium acid 10 %	o	+	k.A.
Acetic acid concentrated	–	–	–
Acetic acid (up to 10%)	+	+ < 10% <sup>1)</sup>	+
Formaldehyde (up to 10%)	o	+	k.A.
Glycerin	+	o	+
Uric acid (up to 20%)	+	k.A.	k.A.
Potassium (20-25°C)	+	–	–
Kerosene (aviation gasoline)	o/–	–	+
Sea water	+	+	+
Methyl alcohol (up to 23°C)	o/–	–	+
Lactic acid < 4%	+	+	k.A.
Sodium chloride	+	+	+ up to 10% <sup>1)</sup>
Sodium hydroxide Solution 20-25 °C	+	–	+
Petroleum	o	o	+
Phosphoric acid Concentrated	–	+ 10 up to 30% <sup>1)</sup>	+ 25% <sup>1)</sup>
Soap liquor (at 23 °C)	+	o	up to 10% OK
Sulfuric acid H2SO4	–	–	–
Sulfuric acid up to 30%	+	+	+ bis 10% <sup>1)</sup>
Sulphur dioxide dry (at 23 °C)	–	o	k.A.
Turpentine (at 23 °C)	+/o	–	+
Toluene	–	–	–
Acidity of wine	+ up to 50% <sup>1)</sup>	+ up to 10% <sup>1)</sup>	k.A.
Citric acid up to 20 %	+	+	+ up to 10% <sup>1)</sup>

Legend: + = resistant, O = limited resistant – = volatile (unstable) <sup>1)</sup> = concentration

## Yellowing of glasses made of PC

Polycarbonate (PC) is a plastic that turns brown when exposed to UV radiation. When installing the light fittings in outdoor areas the material is exposed to UV-radiation, but also bulbs may emit UV light (eg fluorescent lamps).

To delay the discoloration of the PC we are using so-called UV stabilizers in the respective materials. These stabilizers slow down the process significantly, but do not prevent it. The time course of the discoloration is dependent on the degree of exposure to UV radiation. The discoloration is not a product defect.

## Corrosion resistance of sheet steel luminaires

Our steel sheet luminaires are powder coated with a high quality polyester paint. In addition to the corrosion protection, the coating offers a very good scratch resistance. Depending on the conditions of use at the installation site, however, corrosion may still occur.

Examples are applications with permanent humidity, mounting locations close to the sea, under canopies or areas with aggressive media / chemicals. For such conditions we offer, depending on the requirement, modified versions with KTL coating, aluminum or stainless steel housing.

## Properties of LED luminaires

### Rated values as specified in data-sheets

All tolerances of rated values of luminaire input power, luminous flux and efficacy are in accordance with IEC 62722-2-1. Luminaire luminous flux is no more than 10% less than rated luminous flux. Luminaire input power is no more than 10% higher than rated input power. If not specified otherwise all rated values refer to an ambient temperature of  $T_a = 25^\circ\text{C}$ . If LED luminaires are operated at higher temperatures luminous flux decreases by about 1.5% per 10K.

### Rated life

Data-sheets provide values of rated life  $L_x$ .  $L_x$  is the time after which luminous flux has dropped to x% of initial luminous flux. At rated life  $L_x$  luminous flux equals x% of rated value. Typical values for "x" are 70 (L70) or 80 (L80). Life time metrics are based on defined test procedures. Figures given in data-sheets are expected values. Thus, the indicated rated life is not a guaranteed luminaire feature. E.g.  $L80B10 \geq 50,000\text{h}$  means that, according to statistics, 90% (100-10) of luminaires maintain at least 80% of initial luminous flux after 50,000. In so doing failures of control gear and soiled glass covers are not considered.

### Switching cycles

Frequent switching may cause an increased LED-module failure rate. In accordance with IEC rules outdoor luminaires are designed for one cycle per day. While for indoor luminaires up to three cycles per day are assumed. If it is required to switch luminaires more frequent it is recommended to employ corridor mode (DIMC). Corridor mode allows unlimited switching of luminaires.

### Use of LED luminaires in corrosive environments

Corrosive gases and other corrosive substances (e.g. ammonia, sulfuric or chlorine compounds) may damage LED light fittings. Depending on substance, concentration, temperature and exposure time, the damage may result in total failure of light fitting. Even luminaires with high degree of ingress protection can be affected since corrosive atmospheres can penetrate into all light fittings. Suitability of light fittings for particular purposes can be assessed e.g. by means of a field test. We recommend the use light fittings out of our product range, which are especially designed for the use in corrosive atmospheres. Version ER: Increased protection against corrosive atmospheres. Light fittings of type ER are approved e. g. for the use in production and storage areas for car wheels. Version HR: High Protection against corrosive atmospheres. Light fittings of type AUS HR are approved e. g. for use in outdoor areas of wastewater treatment plants.

### Mounting of protection class II LED outdoor luminaires to fixing devices with electrical insulation against earth potential.

When mounting protection class II LED light fittings to fixing devices with electrical insulation against earth potential, electrostatic charges could appear (for example, due to weather conditions) which may cause damage of control gear and/or LED modules. None-Grounded fixing devices are, for example, wooden, concrete or plastic poles, electrically insulated mounted steel poles, wall fixations or rope suspensions. Using protection class I light fittings is recommended in these cases. These allow electric charges to discharge via protective earth (PE) conductor. If protection class II light fittings should be installed, such light fittings should be of special design equipped with equipotential compensation. In that case, the yellow/green conductor inside the connecting cable should not make any connection between terminal box and the equipotential terminal inside light fitting.

### Overvoltage protection of LED outdoor luminaires

LED outdoor luminaires and light fittings with electronic control gear for conventional lamps are much more sensitive to surge voltages than luminaires equipped with magnetic ballasts. Due to switching events and load changes voltages of up to 6 kV may occur in outdoor power grids. Lightning strikes in the surroundings of outdoor installations can lead to voltages of up to many times higher than 10 kV depending on distance to light fitting and conductivity of soil.

Lightning that strikes directly into a luminaire will cause such high pulses that no cost-efficient measure can prevent failure of luminaire. Control gear utilized by SCHUCH is having an enhanced overvoltage protection.

By installing an additional overvoltage protection device into a luminaire or into a terminal box protection level can be further increased.

Protective device that disconnects luminaire from power supply when it fails does further enhance overvoltage protection.

Regulative provisions limit higher protection levels of protection class II light fittings. It is not permitted to connect protective earth conductor to protection class II fittings. However a comprehensive overvoltage protection is only feasible if an earth conductor would be available and housing of luminaire and pole are connected via protective earth conductor.

We further recommend to install surge arresters into electrical distribution. Thus absorbing direct and indirect lightning strikes into power grids.

Probability of lightning strikes varies very much locally. Should LED outdoor luminaires or conventional light fittings with electronic control gear be installed in regions with high likelihood for lightning strikes we highly recommend to utilize protection class I luminaires with additional protective measures employed in the luminaire, terminal box and electrical distribution.

### Operating restrictions for LED outdoor light fittings with power reduction

Very rarely, leakage currents may occur between the phases or between phase and neutral conductor. This may cause a false switching behavior of luminaires with power reduction via control phase. Then, the light fittings fail to switch on power reduction.

Leakage currents occur due to old or damaged cables with improper isolation or due to the high capacity coupling.

In these cases, one should install a "shunting-box" between control phase and neutral conductor (available on request). The shunting box may be installed in the terminal box or inside the electrical distribution.

When changing single luminaires in existing installations with older light fittings or when extending installations, one could face a problem related to power reduction. For these cases, one should mount additional relays at control phase entry in the already installed light fittings. In such cases, it is more cost-effective to add light fittings with stand-alone power reduction (LA => reduction without control phase).

### Inrush currents of LED light fittings – limited capacity of automatic circuit breakers

Contrary to light fittings with magnetic ballasts, LED light fittings start all at the same time (as well as in case of ECGs with conventional lamps). Inside the storage capacitor of the above ECGs, a high charging current occurs when switching on. The number of light fittings per automatic circuit breaker is limited by the inrush current rather than by the operating current. Because inrush current peak of electronic operating devices depends on the used components and on the circuit itself, it is impossible to make a general assertion about the starting current intensity. For the maximum number of light fittings per automatic circuit breaker, refer to: <http://www.schuch.de/en/service/photometric-files>.

### Photobiological Safety

Photobiological safety of luminaires is treated in IEC 62471:2006. This standard provides information on safety limits and risk groups for irradiation as well as measurement methods for UV-, visible and IR- spectral range. The protective goal is to prevent human eye and skin from thermal and photochemical hazards.

Almost all luminaires of SCHUCH are within risk groups 0 and 1. Thus they are harmless since they cannot cause any photobiological impairment to human skin or eye. Luminaires that fall under risk group 2 are marked by a pictogram "do not stare at operating light source". In addition mounting instructions provide information on minimum distance required for safe view into light fitting. Due to installation site any hazard can be ruled out for most class 2 technical luminaires since view from short distance is not possible. Duplicating distance reduces irradiation to one quarter (inverse-square law). Therefore in most cases caution may only be required during maintenance work.

Risk group 3 luminaires disqualify for approval since they would imply a non neglectable risk.

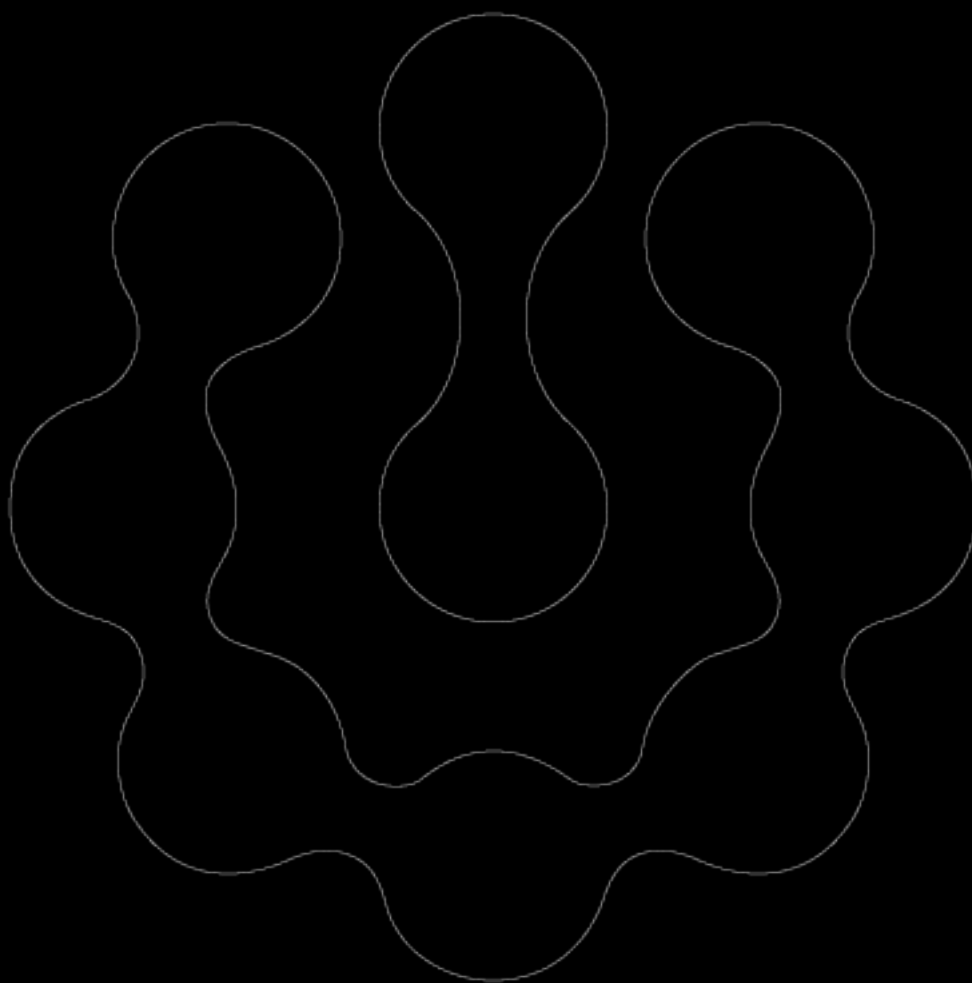


## Summary of the products

Series	Page
110...	75
110... H50	76
130/131...	74
131...	173
131... W MA (emergency light fitting)	174
131... ZB	174
140...	80
144...	62
144... AUS	63
161...	166
161... FF/FC	57
161... H50 MA (emergency light fitting)	168
161... MA (emergency light fitting)	167
161... VARIO	59
161... VARIO AUS	60
161... VARIO LM	61
161... ZB	167
161/162...	52
161/162... AUS	55
161/162... DIMC	53
161/162... DIMD	53
161/162... H50	54
161/162... IFS	56
161/162... LM	56
161/162... RLED OV	68
161/162... SENS	54
161/162... T40	55
161/162... T40/H	55
161/162... TB	54
163 ..G2	169
163... G2 MA (emergency light fitting)	170
163... G2 ZB	170
163/164... DIMC	65
163/164... DIMD	65
163/164... G2	64
163/164... H50	66
163/164... IFS	67
163/164... RLED OV	68
163/164... SENS	66
163/164... T40	66
164KL...	171
164KL... MA (emergency light fitting)	171
164KL... ZB (emergency light fitting)	172
164KL... G2	73
167... AUS	69
167... G2	69
167... IFS	70
167... LW	70
185...	78
190...	77
287...	124
3301/3302...	86
3302... V	89
3305...	90
3401 L250 G2	94
3401/3402... G2	92
3403...	96
3405...	98
3610...	71
3611...	72
3611...	175

Series	Page
3611... MA (emergency light fitting)	175
3611... ZB (emergency light fitting)	176
42 AL... VARIO	112
42... VARIO M	114
4210	48
4216	48
43 L...	118
46...	116
47...	109
47... FUE	111
47... A	143
48...	104
48... VARIO	107
48... A	141
49...	122
541... C OR	133
543... C	135
544...	125
553... C	137
556... C	127
557... C	129
558...	131
564/565...	139
59...	120
7571/2/3... A	151
7600... VARIO	153
7600... A VARIO	145
7700...	155
7700... A	147
7700... SSK	100
7800...	157
7800... A	149
7800... SSK	100
7850... SP	159
7850... SP OV	160
8040	49
8118	49
AL (EX)	46
AL (FR)	81
AREALO	159
CILA	131
CUPINA	127
d9000...	28
DV (EX)	47
DUEVO MID	86
DUEVO MID V	89
DUEVO XL MID	90
DV (FR)	82
e821	26
e840...	20
e840... PM	21
e855...	22
e856...	24
e864...	18
e865 H..	16
e865...	16
e9310	31
e9312	30
ExeLed 1	16
ExeLed 1 N	18
ExeLed 2	32

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