

PRODUCT CATALOGUE

LED Light Fittings



2019/20

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

***With passion for
excellent lighting - since 1895!***

Inhalt

SCHUCH - Das Unternehmen

Chronik	2-3
Alles im Griff	4
Qualität	5
Nachhaltigkeit	5

Ex-geschützte LED-Leuchten Zone 1/21 **6-19**

Wannenleuchten	8-17
Scheinwerfer	18-19

Ex-geschützte LED-Leuchten Zone 2/22 **20-31**

Wannenleuchten	20-25
Hallenstrahler	26-27
Scheinwerfer / Planflächenstrahler	28-31

Ex-Installationsmaterial **32-35**

LED-Feuchtraumleuchten **36-67**

Wannenleuchten	38-55
Ovalleuchten	56
Kompakte LED-Leuchte	57
Rohrleuchte	58-59
Metallleuchten	60-63
Antivandalenleuchten	64
Trageschienen/Durchgangsverdrahtungen	65-67

LED-Hallenstrahler **68-81**

2-Punkt Aufhängung	70-75
1-Punkt Aufhängung	76-81

LED-Außenleuchten **82-147**

Technische Außenleuchten	84-105
Dekorative Außenleuchten	106-119
Planflächenstrahler	120-131
Scheinwerfer	132-138
Rohrausleger und Mastaufsätze	139-140
RFL - Ready for Lightmanagement Systems	142-143
LIMAS - Lichtmanagementsystem	144-147

LED-Notleuchten **148-161**

Technischer Anhang **162-173**

Baureihenübersicht **174**



SCHUCH fi A COMPANY WITH TRADITIONS

CHRONICLE

March 1, 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.

1937

The company was registered as a limited partnership.

1945

Company's 50th Anniversary. Destruction of all company premises as a result of intense bombing of Worms.

1945 - 1948

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

1948

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

1949

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

1952 - 1953

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

Introduction of own production of so-called "PREPREG" (preimpregnated fibres), as well as construction of an in-house moulding pressroom to produce fiberglass-reinforced polyester housings.

1953

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

1957

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

1964 - 1965

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

1969

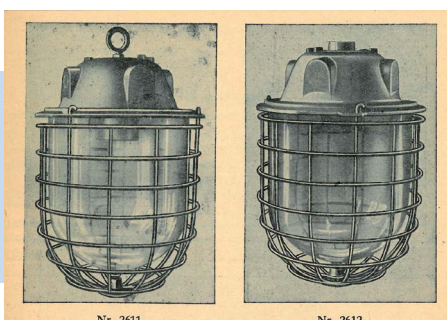
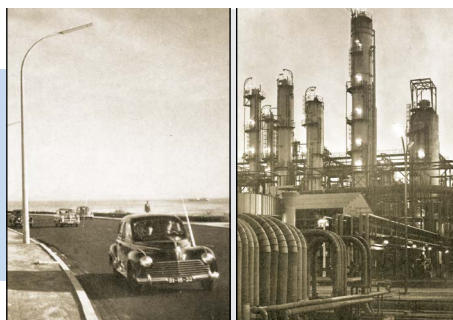
New plant expansion to the total of 40,000 m². SCHUCH achieved a deep vertical integration and extensive technologies for design and production of highly-protected technical light fittings.

1970

Company's 75th Anniversary

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 certification as per DIN ISO 9001.

1996

The company was reorganized into a limited liability company.

1999

First certification of the Quality Management System for explosion-protected products as per Directive 94/9 EC.

After 2000

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

2005

Production of the first light fitting with application of LED technology (emergency light fittings with batteries).

2007

Establishment of a new Engineering Department that specializes on LED equipment and LED light fitting design. Engineering and design activity focused on LED in all product ranges.

2007 - 2008

Production of first waterproof and industrial LED light fittings.

2009 - 2010

Production of first LED streetlight fittings.

2011 - 2012

Production of first explosion-protected LED light fittings.

2014

Modernizing of the main building for energy consumption optimization.

2015

Energy audit at the factory in Worms.

2016

Installation of a new powder coating line in accordance to the current environmental safety aspects.
Production of TRIANO XL high bay LED light fitting with luminous fluxes of up to 50,000lm.
Launch of the Light-Management-System „LIMAS“. A unique remote control system for energy-saving and on-demand control of indoor- and street lighting.

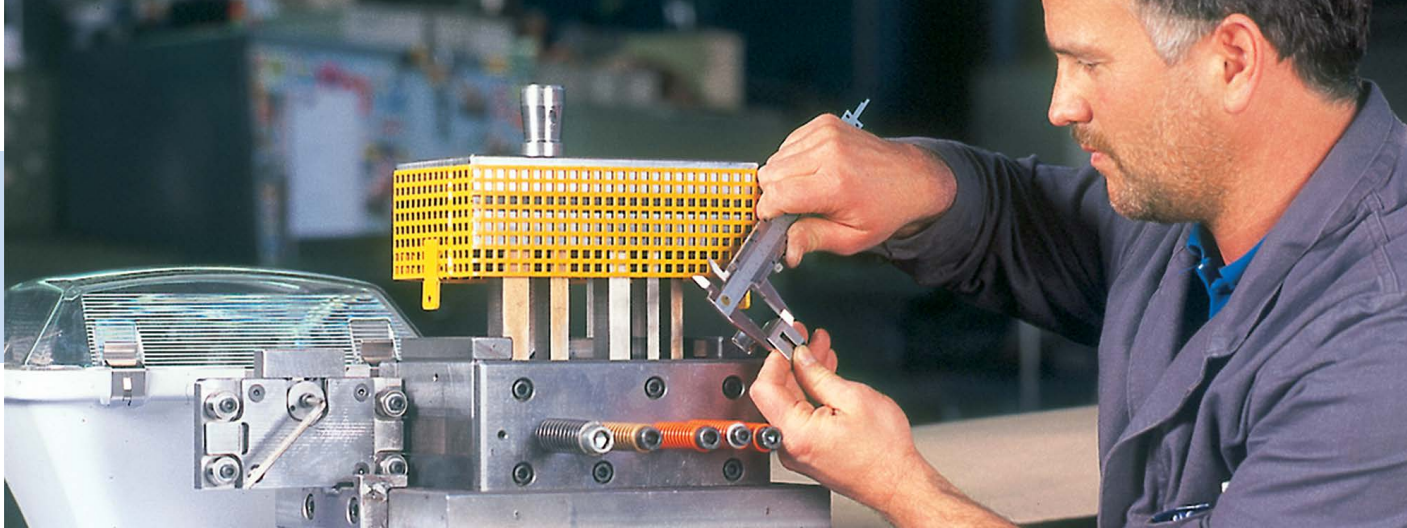
2017

Initial operation of an encapsulation plant for LED boards for explosion-proof luminaires.

2018/19

With extensive capital investments in polyester moulding presses, gasket foaming facilities, sheet steel machine centres and ultra-welding robots, SCHUCH reacts to the raised demands on the market.





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.

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

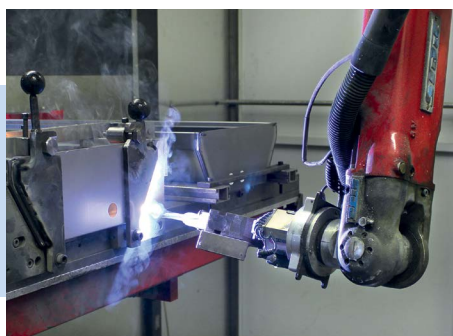
Both light fittings and their components and materials are thoroughly tested in our accredited measuring laboratories.

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 Electromagnetic Compatibility Act.

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

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

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





EXCELLENT QUALITY

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

This is proven by **Quality Certificate as per DIN 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.

The regularly carried out audits mentioned above ensure meeting the strict quality requirements that SCHUCH committed itself to since the foundation of the company.

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

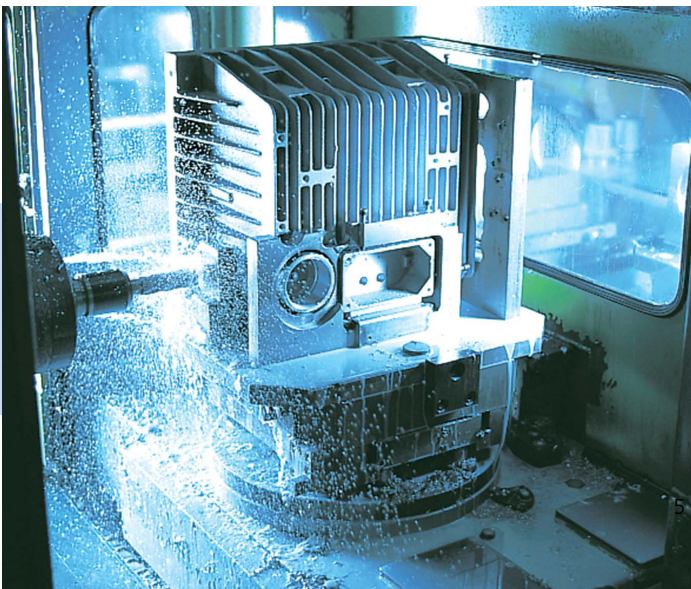
As a manufacturing company, SCHUCH is aware of its eco-political responsibility.

By energy refurbishment of the main building, by using a new powder coating plant according to current environmental safety aspects, and by conducting an energy audit at the whole plant in Worms, SCHUCH contributes a lot to the reduction of carbon dioxide consumption and the environment protection.

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**.

Being a responsible family company, SCHUCH contributes to reducing environmental pollution and saving valuable natural resources.





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.

SCHUCH AS A PIONEER

1910

The first SCHUCH mining light fittings illuminate the coal mines in the Saarland and in the Ruhr region.

1929

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

1952/53

Starting application of fiberglass-reinforced polyester housings in the sector of explosion-protected 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

Introduction of the world's first explosion-protected linear light fitting with an ECG and an "end-of-life" cut-off system. World's first approval to use an explosion-protected ECG with an "end-of-life" cut-off system. It was immediately accepted as a mandatory standard requirement. This was another important milestone that documented SCHUCH's innovative strength.

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.



Explosion-Protected Light Fittings

LED-Technology

Product	Series	Page
Light Fittings for Zone 1/21		
Light fittings with diffuser Exe-Led 1	e865...	8
Emergency light fittings ExeLed 1 N	e864...	10
Light fittings with diffuser with central locking system	e840...	12
Pole mounted light fittings	e840... PM	13
Compact light fittings with diffuser	e855...	14
Compact emergency light fittings	e856...	16
Floodlights	d9000...	18
Light Fittings for Zone 2/22		
Light fittings with diffuser ExeLed 2	nD866...	20
Emergency light fittings ExeLed 2 N	nD867...	22
Compact emergency./ escape light fittings	nD8611...	24
High bay light fittings	nD8301/02...	26
Floodlights / Plane surface floodlights	nD8700...	28
	nD8800...	30
Ex-Installation material		
Carrier rail systems	TRS 2000	32
	AL	32
Through wiring systems	DV	33
Wall sockets	4216	34
Plugs	4210	34
Installation switches	8040	35
Junction boxes	8118	35

new

Explosion protected
Light Fittings

LED TECHNOLOGY

2011

Approval of the first protected LED floodlight, emergency light fittings and compact light fittings.

2014

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

2015/16

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

2016-18

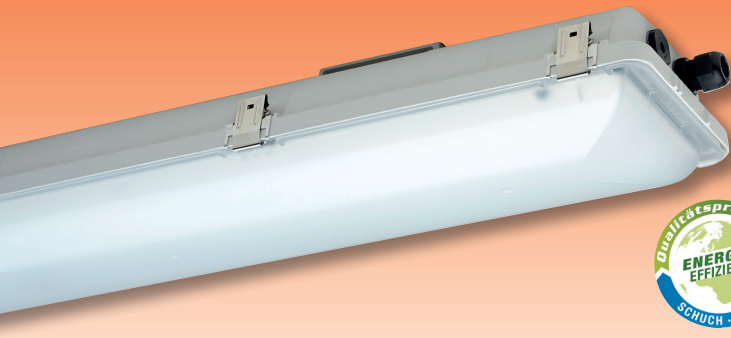
The LED light range is growing with a rapid pace. Introduction of ExeLed 1 N and ExeLed 2 N Emergency versions, LED-Floodlights/ Plane surface floodlight such as compact light fittings with diffuser and emergency light fittings. The proportion of LED grow up to 72%.



ExeLed 1

LED-Light Fitting for Ex-Zones 1/21

Series e865...



Application:

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: Aluminium, painted, carrying the encapsulated LED-modules and all electrical components, clipped into the cover, removable as a unit.

Connection: 3 poles up to 4 mm².

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

Standard: Facing downwards or forwards.

Mechanical installation:

Mounting accessories see spare parts/accessories.

Technical Data:

LED: Line modules appr. 6,500K, CRI typically 80,

Lifetime: L_{70B10} > 100.000h

L_{80B50} > 100.000h

L_{90B50} > 50.000h

each at max. ambient temperature, (see notes)

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

Options:

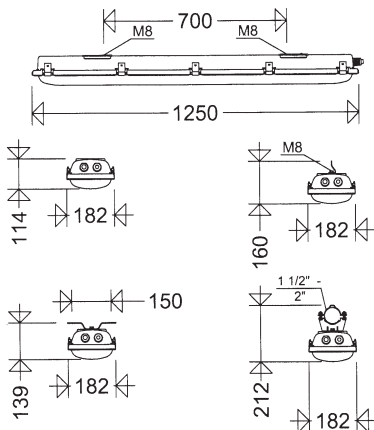
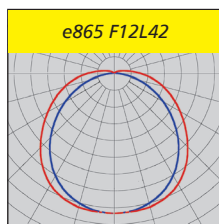
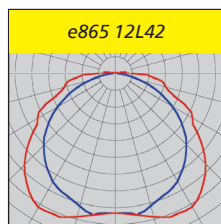
- for connection to group or central battery (light fittings of version ZB only)
- with monitoring module for monitoring the individual light fitting
- dimmable via DALI-interface (DIMD)

- for explosive dust atmospheres Zone 21 (**t868...**)
- for higher ambient temperatures up to +70°C depending on version



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.



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.



Notes:

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

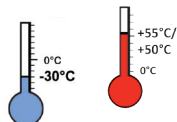
All technical data is relevant at the time of print. Actual technical data can be found in the internet under www.schuch.de.

SCHUCH Quality - your advantage:

- 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 typically 80, according to the workplace guide lines suitable for nearly all plant locations
- external mounting system for variable mounting distances and easy installation (retaining clips HK865 P)
- lower maintenance and downtime costs due to long maintenance intervals
- ECG and reflector with LED-modules **replacable 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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e865...	LED	Ex	II 2 G Ex eb mb op is q IIC T4 Gb	II 2 D Ex op is tb IIIC T80°C Db	IP66	
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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.

86500 0001	e865F 12L42	34	4.520	133	•	55	A++	2 x 36W	6,0
86500 0002	e865F 12L60	47	5.920	126	•	55	A++	2 x 58W	6,0
86500 0003	e865F 12L85	65	8.810	136	•	50	A++	> 2 x 58W	6,3
86500 0011	e865 12L42	34	4.770	140	•	55	A++	2 x 36W	6,0
86500 0012	e865 12L60	47	6.290	134	•	55	A++	2 x 58W	6,0
86500 0013	e865 12L85	65	9.260	142	•	50	A++	> 2 x 58W	6,3

* see notes

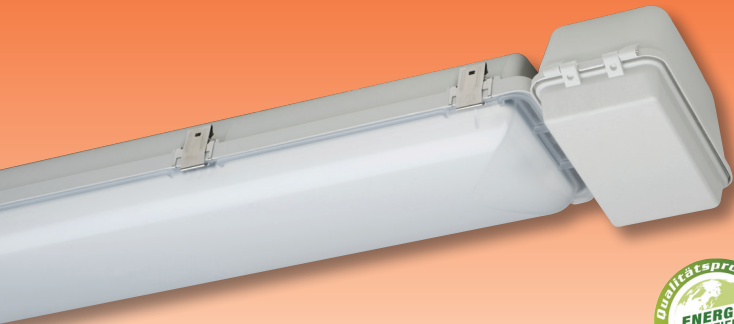
** The given information is for rough orientation only. In each individual case a lighting calculation is necessary.



Photo: BASF

Accessories / Spare Parts

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

Application:

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: Aluminium, painted, carrying the LED-modules, clipped into the cover, suspendable.

Connection: 4 poles up to 4mm².

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

Standard: Facing downwards or forwards.

Mechanical installation:

Mounting accessories see spare parts/ accessories. Sealing gaskets for direct ceiling mounting are included.

Technical Data:

LED: Line modules ca. 6,500K, typically R_a 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

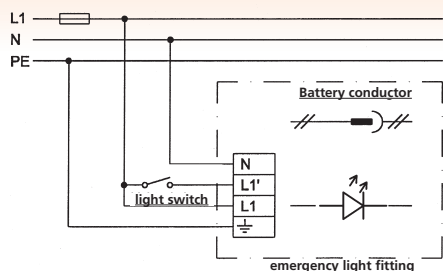
Mode of operation:

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:

- dimmable via DALI-interface (DIMD, be offered for all wattages
- for centralized Control and Monitoring) – inhibiting facility
- integrated through-wiring system can

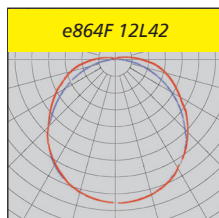
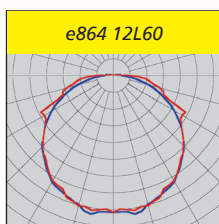


Starting:

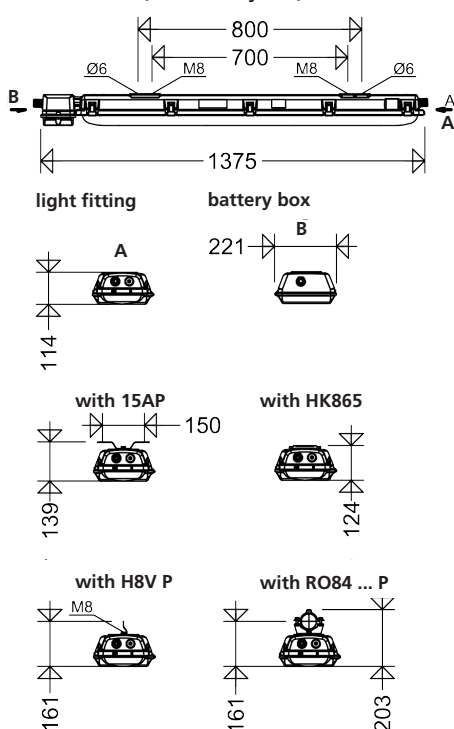
Connect battery conductor.

Out-of-operation: separate battery conductor.

Stand-by operation: Do not connect L1'.



e864 12L... (with battery box)



SCHUCH Quality - your advantage:

- 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
- flexible when installed in the light band
- one sided loop-in/loop-out
- 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 typically 80, according to the workplace guide lines suitable for nearly all plant locations
- external mounting system for variable mounting distances and easy installation (retaining clips HK865 P)
- lower maintenance and downtime costs due to long maintenance intervals
- ECG and reflector with LED-modules replacable 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.

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:

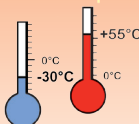
This light fitting is not suitable for applications in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.

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



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.

86400 0001	e864F 12L42/1/1,6	35	4.520	700	129	•	•	•	55	A++	2 x 36W	7,6
86400 0002	e864F 12L60/1/1,6	47	5.920	700	126	•	•	•	55	A++	2 x 58W	7,6
86400 0101	e864F 12L42/3/4	35	4.520	700	129	•	•	•	55	A++	2 x 36W	8,0
86400 0102	e864F 12L60/3/4	47	5.920	700	126	•	•	•	55	A++	2 x 58W	8,0
86400 0011	e864 12L42/1/1,6	35	4.770	740	136	•	•	•	55	A++	2 x 36W	7,6
86400 0012	e864 12L60/1/1,6	47	6.290	740	134	•	•	•	55	A++	2 x 58W	7,6
86400 0111	e864 12L42/3/4	35	4.770	740	136	•	•	•	55	A++	2 x 36W	8,0
86400 0112	e864 12L60/3/4	47	6.290	740	134	•	•	•	55	A++	2 x 58W	8,0

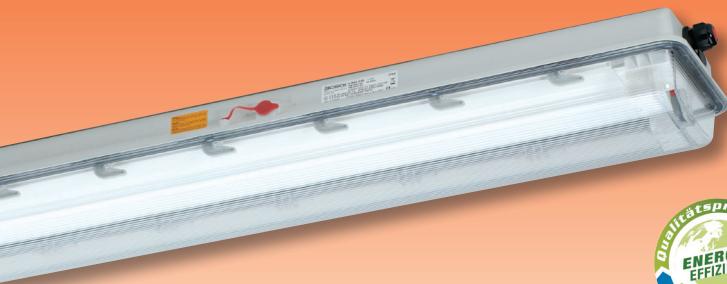
* see notes

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



Accessories / Spare Parts

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



LED-Light Fitting for Ex-Zone 1/2/1 Series e840...

Application:

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

Design:

Housing: Glass fibre reinforced polyester resin.

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

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

Reflector: Aluminium, carrying the encapsu-

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

Connection: 3 poles up to 4 mm².

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

Standard: Facing downwards or forwards.

Mechanical installation:

Mounting accessories see spare parts/ accessories.

Technical Data:

LED: Line modules appr. 6,500K, CRI typically 80,

lifetime $L_{70B_{10}} > 80,000h$

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

at max. ambient temperature

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

Options:

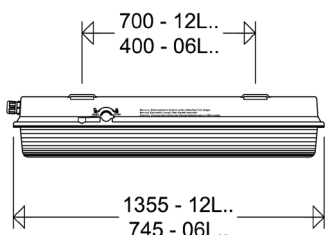
- for connection to group or central battery (light fittings of version ZB only)
- with monitoring module for monitoring the individual light fitting
- dimmable via DALI-interface (DIMD)

- with through-wiring 5 x 2,5mm²
- for higher ambient temperatures up to +65°C depending on version

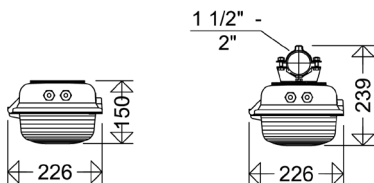


Note:

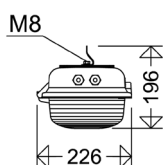
This light fitting is not suitable for applications in areas with permanent high humidity in combination with only short periods of operation, such as sewage or stormwater retention tanks or water treatment plants.



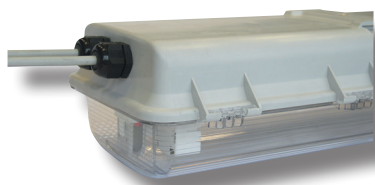
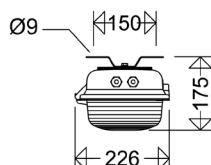
Pipe clamp mounting



Suspension eyes H8V



Ceiling brackets 15A



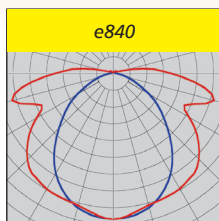
Looping the cable on one side:

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.



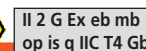
SCHUCH Quality - your advantage:

- 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 typically 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...



EC-Type Examination Certificate:

PTB 16 ATEX 2001

PTB 16 ATEX 2011

Other approvals:

IECEx PTB 16.0004

IECEx PTB 17.0011

Ignition protection: eb

Marking:

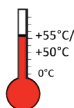
II 2 G Ex eb mb op is q IIC T4 Gb (Zone 1)

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

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

Permissible ambient temperature:

-25°C up to see article table



84005 0011	e840 06L22	18	2.140	119	55	A++	2 x 18W	5,6
84005 0012	e840 06L42	33	4.240	128	55	A++	2 x 36W	5,7
84005 0001	e840 12L42	33	4.240	128	55	A++	2 x 36W	8,0
84005 0002	e840 12L60	47	5.610	119	55	A++	2 x 58W	8,0
84005 0003	e840 12L85	65	8.350	128	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:

PTB 16 ATEX 2001

PTB 16 ATEX 2011

Other approvals:

IECEX PTB 16.0004

IECEX PTB 17.0011

Ignition protection: eb

Marking:

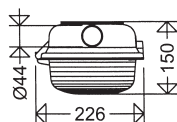
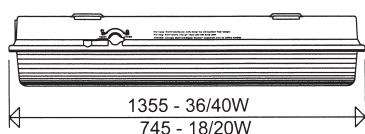
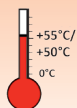
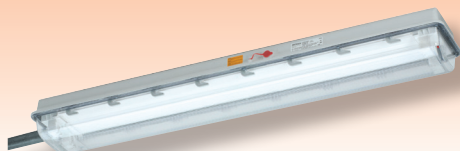
II 2 G Ex eb mb op is q IIC T4 Gb (Zone 1)

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

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

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

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



84005 0911	e840 06L22 PM	18	2.140	119	55	A++	2 x 18W	7,9
84005 0912	e840 06L42 PM	33	4.240	128	55	A++	2 x 36W	8,0
84005 0901	e840 12L42 PM	33	4.240	128	55	A++	2 x 36W	8,1
84005 0902	e840 12L60 PM	47	5.610	119	55	A++	2 x 58W	8,1
84005 0903	e840 12L85 PM	65	8.350	128	50	A++	> 2 x 58W	8,7

* see notes

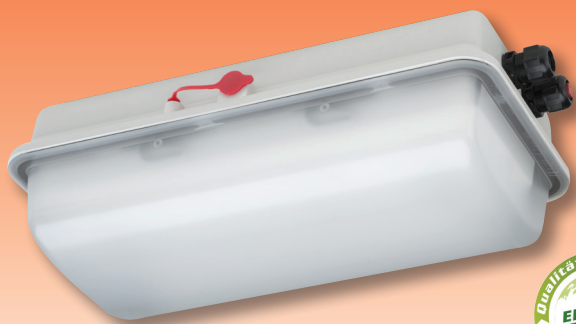
** The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

Explosion protected
Light Fittings

Accessories / Spare Parts

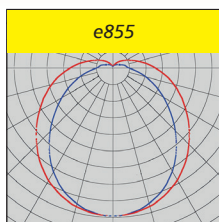
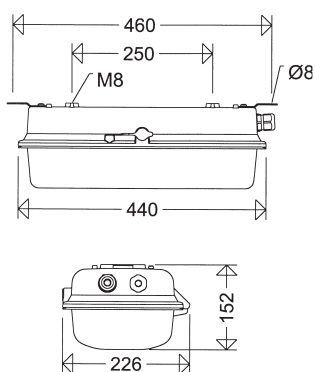
Article No.	Type	
Spare diffuser		
84001 9006	8402 SIL	for e840 06L... manufactured until 2018, please see type plate of light fitting: article no. without "G" at the end
84001 9007	8402 SIL G	for e840 06L... manufactured from 2018, please see type plate of light fitting: article no. with "G" at the end
84001 9004	8404 SIL	for e840 12L...
Cable glands/ breather		
90117 9000	2537	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9000	2538	ex-protected plastic plug M25 x 1,5 with nut
90259 9000	Klimastutzen EX	breather M25 x 1,5
Mounting material		
90001 0002	H8V P	2 suspensions eyes with bolts, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90000 0011	84 AA	1 pair of brackets, stainless steel, for compensating the different mounting distances of types e840 / e152 or e841 / e148
90037 0004	RO84 112 A P	2 pipe clamps 1 ½", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26/L P	2 wall mounting angles
26000 0002	W 26/30 P	2 wall mounting angles 30°
26000 0003	W 26/45 P	2 wall mounting angles 45°

Small LED-Light Fittings for Ex-Zone 1/2/1 Series e855...



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.



Application:

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 2,5mm².

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

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

Technical Data:

LED: Line modules appr. 6,500K, CRI typically 80, lifetime

$L_{70B_{10}} > 80,000h$

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

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)
- with monitoring module for monitoring the individual light fitting
- dimmable via DALI-interface (DIMD)
- preparation for a 5-core looping

SCHUCH Quality - your advantage:

- 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 typically 80, according to the workplace guide lines suitable for nearly all plant locations
- ECG and reflector with LED-modules **replacable by qualified personnel on-site**



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Diffuser frosted	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

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

* 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.



Foto: BASF



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



121/33 W

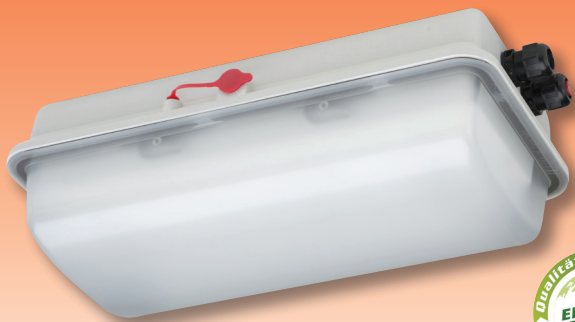
.../34 W

.../35 W

Viewing distance = 25m

Accessories / Spare Parts

Article No.	Type	
Spare diffuser		
85501 9001	855	PC frosted
Cable entries / Glands / Breathers		
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
Mounting material		
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26/L P	2 wall mounting brackets
26000 0002	W 26/30 P	2 wall mounting brackets 30°
26000 0003	W 26/45 P	2 wall mounting brackets 45°
Self-adhesive pictograms		
12112 0006	121/33 W	emergency exit to the left
12112 0007	121/34 W	emergency exit to the right
12112 0008	121/35 W	emergency exit below



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

Application:

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.

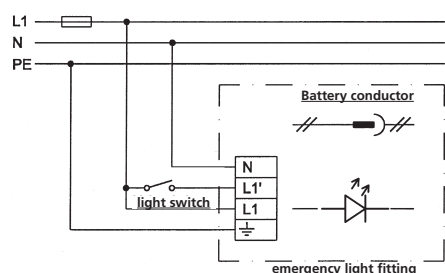
Connection: Prepared for looping the mains cable at one end 4 x 2.5mm². Terminal L1 + L1' + N + PE, up to 2.5 mm².

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

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

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.



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, typically R_a 80, Lifetime L_{70B10} > 80.000h, L_{80B50} > 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

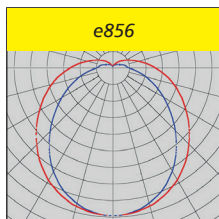
Re-charging time: 24h, acc. to EN 60598-2-22

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.

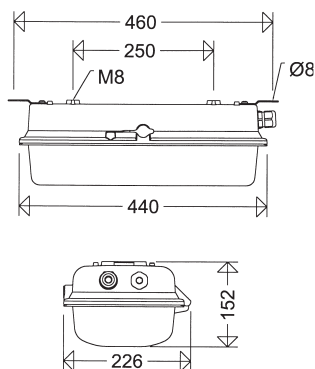
stand-by operation = switching on in case of mains failure.



Options:

- dimmable via DALI-interface (DIMD, for centralized Control and Monitoring))
- preparation for a 6-core looping at one end
- remote inhibiting facility

e856F ... (without battery box)



SCHUCH Quality - your advantage:

- 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 as ESD and mechanical damage. No individual light points visible, comfortable perception of light, brilliant glare limitation.
- high colour rendering index CRI typically 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



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.



Foto: BASF

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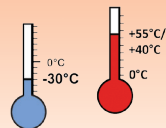
e856...



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

II 2 D Ex op is tb
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 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 40° or 50°C (H-Versions).

Reduced emergency light duration if
operated below 0°C.

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

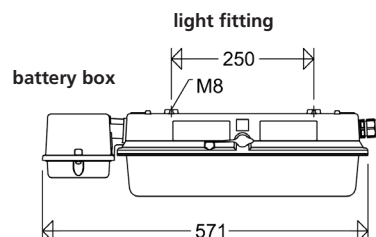
85600 0007	e856F L10/1/1,6 H	11	1.060	560	96	•	•	•	55	A++	2 x 8W	6,3
85600 0008	e856F L10/3/2,5 H	11	1.060	260	96	•	•	•	55	A++	2 x 8W	6,4
85600 0005	e856F L20/1/1,6 H	19	2.050	560	108	•	•	•	55	A++	2 x 18W	6,4
85600 0006	e856F L20/3/2,5 H	19	2.050	260	108	•	•	•	55	A++	2 x 18W	6,5

* 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	
Spare batteries		
90222 9023	AKKU 8020	Spare battery 1.6Ah
90222 9024	AKKU 8021	Spare battery 2.5Ah
Spare diffuser		
85501 9001	855	PC frosted
Cable entries / Glands / Breathers		
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
Mounting material		
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
90038 0004	RO84 2 A P	2 pipe clamps 2", stainless steel, with support
26000 0008	W 26/L P	2 wall mounting brackets
26000 0002	W 26/30 P	2 wall mounting brackets 30°
26000 0003	W 26/45 P	2 wall mounting brackets 45°
Self-adhesive pictograms		
12112 0006	121/33 W	emergency exit to the left
12112 0007	121/34 W	emergency exit to the right
12112 0008	121/35 W	emergency exit below

LED 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.

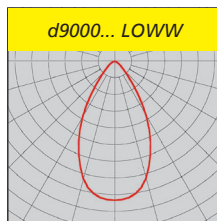
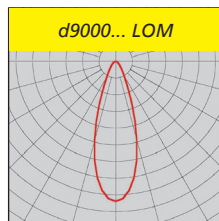
Safety glass pane: Resistant to temperature variations, sealed into the frame, hingeable.

Light control: LED optics with narrow

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

Connection terminal: Standard: L1+N+PE, clamping range: 2,5mm².

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)

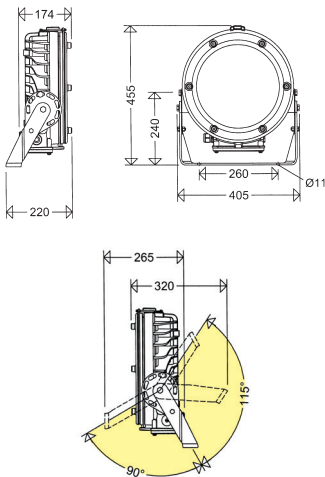
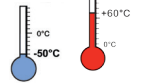
ECG: 220V - 240V AC, 50/60Hz. Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited. Overvoltage protection 3kV, excess temperature protection-, overload and short circuit protection.

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

Options:

- clamping range up to 6mm²
- 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)



Swivel range: ± 205

SCHUCH Quality - your advantage:

- 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

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.



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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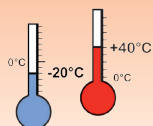
d9000 ...



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

narrow wide beam

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

* see notes

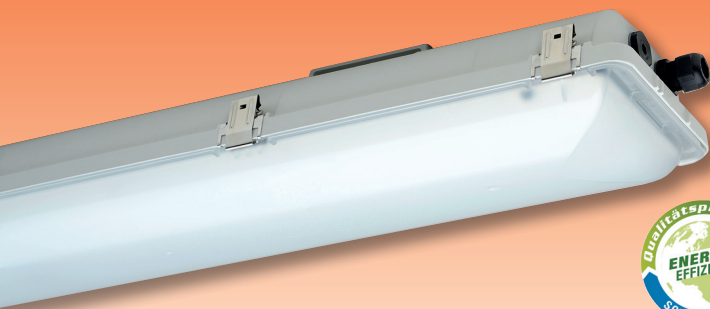
** The given information is for rough orientation only. In each individual case a lighting calculation is necessary.

*** depending on cable gland used

Explosion protected
Light Fittings

Accessories / Spare Parts

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



ExeLed 2

LED-Light Fitting for Ex-Zones 2/22

Series nD866...

Application:

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: Aluminium, painted, carrying the

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

Connection: 3 poles up to 2,5 mm².

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

Standard: Facing downwards or forwards.

Mechanical installation:

Direct ceiling mounting is possible. Rubber washers are included

Further mounting options see accessories / spare parts.

Technical Data:

LED: Line modules 5,000K, CRI typically 80,

Lifetime: $L_{70B_{10}} > 100.000h$

$L_{80B_{50}} > 100.000h$

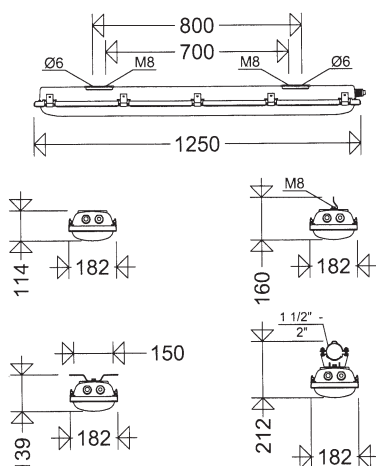
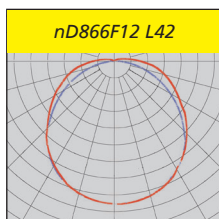
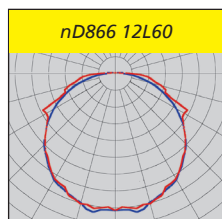
$L_{90B_{50}} > 50.000h$

at max. ambient temperature

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)
- with monitoring module for monitoring
- the individual light fitting
- dimmable via DALI-interface (DIMD)
- with through-wiring 5 x 2,5mm²



SCHUCH Quality - your advantage:

- 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 typically 80, according to the workplace guide lines suitable for nearly all plant locations
- external mounting system for variable mounting distances and easy installation (retaining clips HK865 P)
- 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.

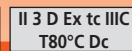
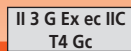


Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W] **	Cover frosted	Cover clear	Ta max [°C]	Energy efficiency class	Substitute for **	Weight [kg] (without packing material)
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Note:

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.

nD866...



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 0002	nD866F 12L42	31	4.420	143	•	40	A++	2 x 36W	4,7
86600 0003	nD866F 12L60	46	6.060	132	•	40	A++	2 x 58W	4,7
86600 0004	nD866F 12L85	61	8.700	143	•	40	A++	> 2 x 58W	4,8
86600 0012	nD866 12L42	31	4.690	151	•	40	A++	2 x 36W	4,7
86600 0013	nD866 12L60	46	6.430	140	•	40	A++	2 x 58W	4,7
86600 0014	nD866 12L85	61	9.250	152	•	40	A++	> 2 x 58W	4,8

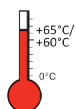
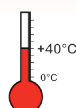
for high temperature ¹⁾

86600 0005	nD866F 12L42 H65	31	4.420	143	•	65	A++	2 x 36W	4,7
86600 0008	nD866F 12L60 H60	46	6.060	132	•	60	A++	2 x 58W	4,7
86600 0015	nD866 12L42 H65	31	4.690	151	•	65	A++	2 x 36W	4,7
86600 0017	nD866 12L60 H60	46	6.430	140	•	60	A++	2 x 58W	4,6

* see notes

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

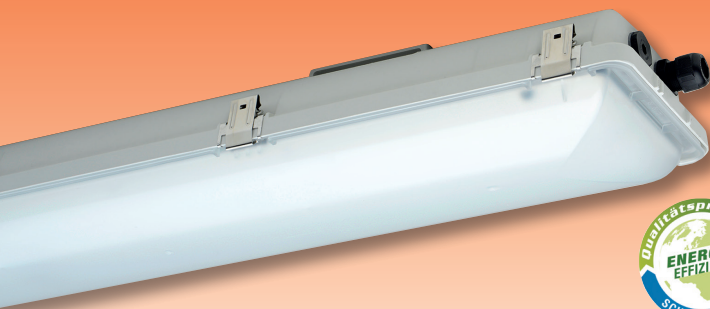
¹⁾ through-wiring or looping the cable is not permissible.



Explosion protected
Light Fittings

Accessories / Spare Parts

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

LED-Emergency Light Fitting for Ex-Zones 2/22 Series nD867...

Application:

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: Aluminium, painted, carrying the LED-modules and all electrical components, clipped into the cover, suspendable.

Connection: 4 poles up to 2,5 mm².

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

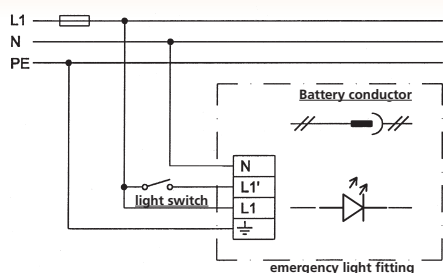
Versions H with 2 x M25 x 1,5 at the front end of the light fitting.

Standard: Facing downwards or forwards.

Mechanical installation:

Direct ceiling mounting is possible. Rubber washers are included

Further mounting options see accessories / spare parts.

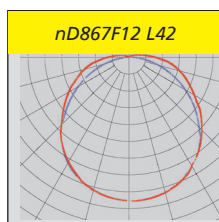
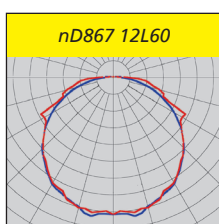


Starting:

Connect battery conductor.

Out-of-operation: separate battery conductor.

Stand-by operation: Do not connect L1'.



Technical Data:

LED: Line modules 5,000K, typically 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:

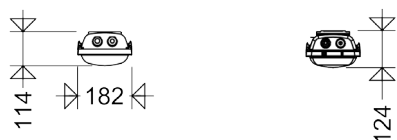
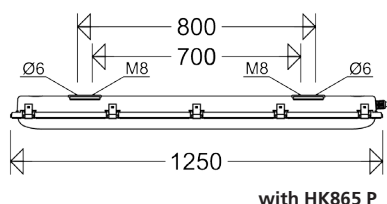
maintained operation = switching over to battery operation in case of mains failure, line modules will be operated with reduced luminous flux as emergency lighting.

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

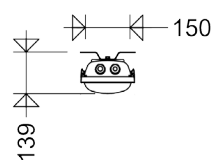
Options:

– dimmable via DALI-interface (DIMD), – inhibiting facility for centralized Control and Monitoring)

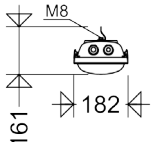
nD867... 12L.. (without battery box)



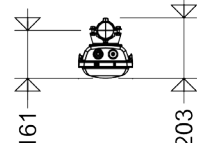
with 15AP



with H8V P



with RO84 ... P



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.

SCHUCH Quality - your advantage:

- 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 typically 80, according to the workplace guide lines suitable for nearly all plant locations
- external mounting system for variable mounting distances and easy installation (retaining clips HK865 P)
- ECG and reflector with LED-modules replacable by qualified personnel on-site

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.

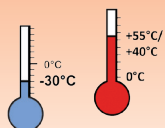
nD867...



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 +55°C

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 0001	nD867F12L42/1/1,6	33	4.420	750	134	•	•	•	40	A++	2 x 36W	5,2
86700 0002	nD867F12L60/1/1,6	48	6.060	750	126	•	•	•	40	A++	2 x 58W	5,2
86700 0011	nD867 12L42/1/1,6	33	4.690	800	142	•	•	•	40	A++	2 x 36W	5,2
86700 0012	nD867 12L60/1/1,6	48	6.430	800	134	•	•	•	40	A++	2 x 58W	5,2
86700 0101	nD867F12L42/3/4	33	4.420	750	134	•	•	•	40	A++	2 x 36W	5,6
86700 0102	nD867F12L60/3/4	48	6.060	750	126	•	•	•	40	A++	2 x 58W	5,6
86700 0111	nD867 12L42/3/4	33	4.690	800	142	•	•	•	40	A++	2 x 36W	5,6
86700 0112	nD867 12L60/3/4	48	6.430	800	134	•	•	•	40	A++	2 x 58W	5,6

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

for high temperatures up to +55°C

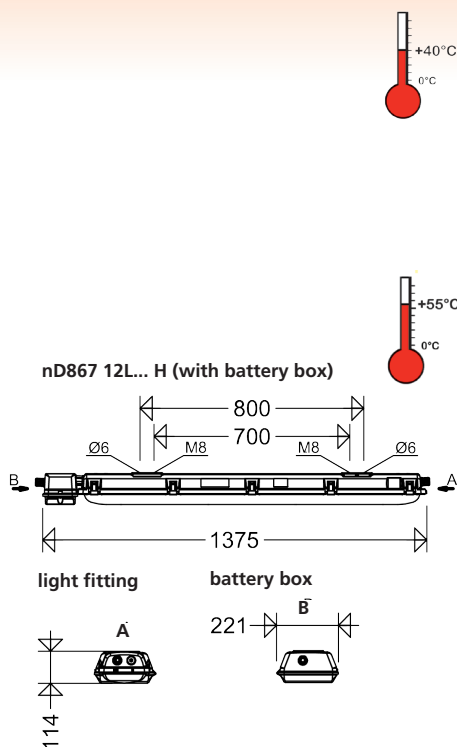
Design:

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

86700 0201	nD867F12L42/1/1,6 H	33	4.420	750	134	•	•	•	55	A++	2 x 36W	6,1
86700 0202	nD867F12L60/1/1,6 H	48	6.060	750	126	•	•	•	55	A++	2 x 58W	6,1
86700 0211	nD867 12L42/1/1,6 H	33	4.690	800	142	•	•	•	55	A++	2 x 36W	6,1
86700 0212	nD867 12L60/1/1,6 H	48	6.430	800	134	•	•	•	55	A++	2 x 58W	6,1
86700 0301	nD867F12L42/3/4 H	33	4.420	750	134	•	•	•	55	A++	2 x 36W	6,5
86700 0302	nD867F12L60/3/4 H	48	6.060	750	126	•	•	•	55	A++	2 x 58W	6,5
86700 0311	nD867 12L42/3/4 H	33	4.690	800	142	•	•	•	55	A++	2 x 36W	6,5
86700 0312	nD867 12L60/3/4 H	48	6.430	800	134	•	•	•	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	
Spare batteries		
90222 9029	AKKU NiCd 6V 4,0Ah	Spare battery 4.0Ah
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)
Spare covers		
86601 9001	8654F	PC, frosted
86601 9000	8654	PC, clear
Fasteners		
90055 9004	KE/KES VE10	stainless steel, incl. 2 safety clips (packing unit 10 pcs.)
Glands/breather		
90117 9006	2537 G	ex-protected plastic cable gland M25 x 1,5 with nut
90118 9006	2538 G	ex-protected plastic plug M25 x 1,5 with nut
90259 9000	Klimastutzen EX	M25 x 1,5
Mounting material		
86501 9003	HK 865 P	2 retaining clips for variable mounting distances
90001 0002	H8V P	2 suspensions eyes with bolts, stainless steel
90000 0002	15A P	2 ceiling brackets, hot galvanized steel
90032 0002	15AV P	2 ceiling brackets, stainless steel
90037 0004	RO84 112 A P	2 pipe clamps 1 1/2", stainless steel, with support
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 Light Fitting for Ex-Zones 2/22

Series nD8611/... LED

Application:

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. 2,5mm².

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

Mounting: 2 outer fixing points.

Technical Data:

LED: Highpower-LED, 6.500K, CRI > 70, L₇₀B₁₀ > 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.

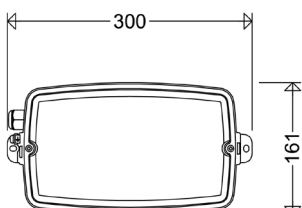
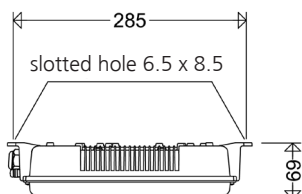
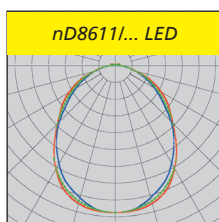
Electronic deep discharge protection acc. to EN 61347-2-7

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

Modes of operation: Maintained or stand-by operation

Options:

- cable looping on one side
- ECG for safety extra-low voltage (24VDC)
- for different ambient temperatures



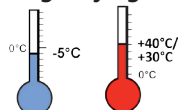
SCHUCH Quality - your advantage:

- 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
- perfect by strained field conditions
- 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)
-------------	------	-------------------------	----------------------	----------------------------------	--------------------------	-------------------	-------------------	-------------------------	--

nD8611/201/. 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 0002	nD8611/201/1W	5	100	100	20	•		A++	1,0
86111 0003	nD8611/201/3W	5	100	100	20		•	A++	1,2

* see notes

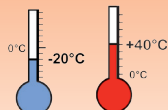
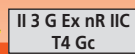
Notes:

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.

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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nD8611/201 W



Ignition protection: nR

Explosion protection:

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

II 3 D Ex tc IIC 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 0001	nD8611/201W	4	100	25			A++	0,8
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for connection to central power supply unit

86111 0301	nD8611/201W ZB	4	100	25			A++	0,8
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* see notes

Explosion protected
Light Fittings



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	
Spare cover		
36004 9002	3611/02	PC, white opalescent
Self adhesive legends for series 3611 and 8611		
12112 0101	220/110/33	Emergency exit to the left
12112 0102	220/110/34	Emergency exit to the right
12112 0103	220/110/35	Emergency exit below
Cable entries		
90120 9008	2531 G	Ex-plastic cable gland M20 x 1,5 with nut
90121 9005	2532 G	Ex-plastic cable gland M20 x 1,5 with plug and with nut
Spare-batteries		
90222 9026	Akku 8620	Spare-battery 1h
90222 9027	Akku 8621	Spare-battery 3h

NEW

LED High Bay Light Fittings for Ex-Zone 2/22

Series nD8301/nD8302...

Application:

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.

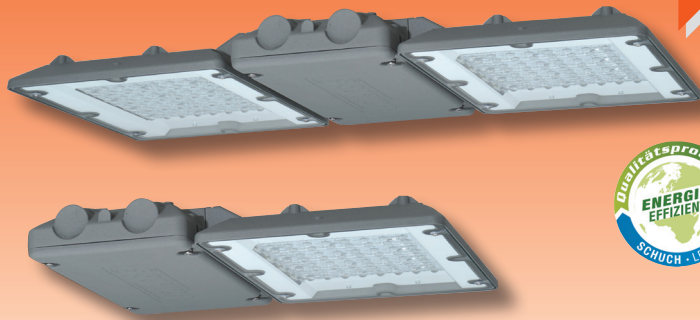
Optics: Without optic wide beam, with optic wide (B) or narrow-wide beam (TB).

Connection: 5 poles up to 2,5mm².

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 L₇₀ 100,000h or at ambient temperature > 50°C L₇₀ > 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

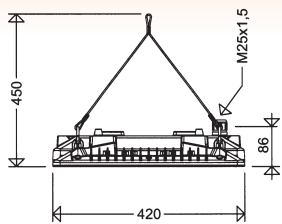
Ambient temperature: -20°C up to +40°C / +50°C / +60°C (see article tables)

Options:

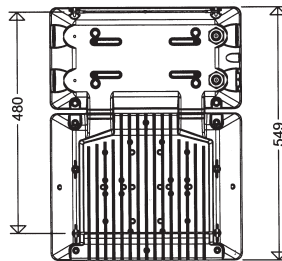
- narrow beam version (T) the whole life cycle
- Version with narrow oval optic (TO) for illumination of aisles in rack areas
- light output reduction (LR) per 230V control line
- uniform luminous flux option (CL) to keep the light output on same level for the whole life cycle
- version with additional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

SCHUCH Quality - your advantage:

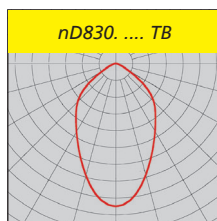
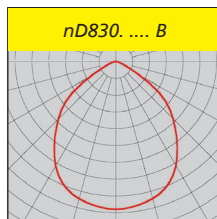
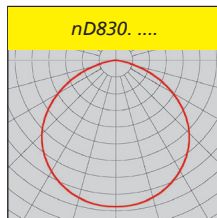
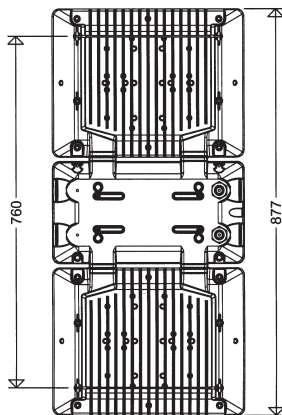
- high efficient by use of top-quality mid-power LEDs
- extremely high lifetime even at the maximum permissible ambient temperature
- **optimized thermo management** due to direct mounting of the LED modules to the housing and separate housings for ECG- and LED-modules, huge heat sink with excellent 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...



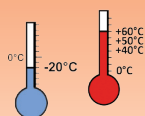
Notes:

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.



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

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

Marking:

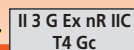
Permissible ambient temperature:

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

-20°C up to +40°C / +50°C / +60°C

II 3 D Ex tc IIIC T100°C Dc (Zone 22)

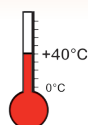
nD8301/nD8302...



... 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



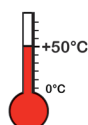
2 LED wing

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



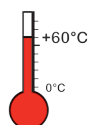
2 LED wings

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	plastic gland M25x1,5 with nut
90118 9006	2538 G	plastic plug M25x1,5 with nut
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... ¹⁾
33001 9007	3302 W	1 angle bracket, adjustable, for wall mounting series nD8302... ¹⁾

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 2,5mm².

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 $L_{70B_{10}}$ 100.000h at max. ambient temperature.

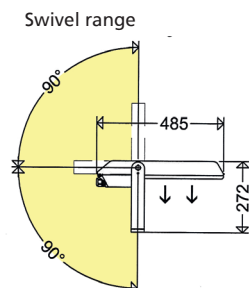
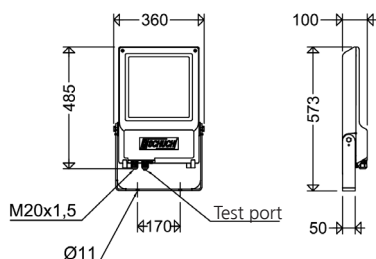
ECG: 220 - 240V, 50-60Hz, life cycle 100.000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection.

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

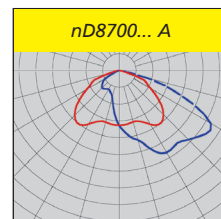
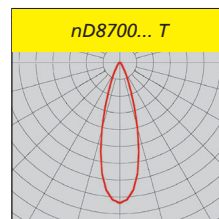
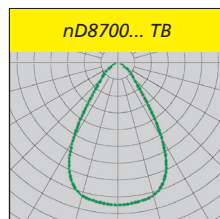
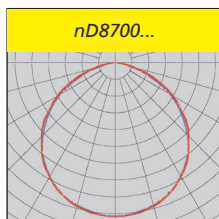
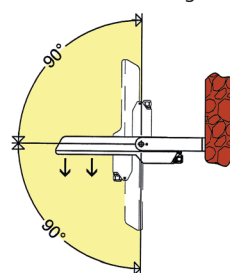
Ambient temperature: -30°C up to +40°C

Optionen:

- light output reduction (LR) per 230V control line (dimable) the whole life cycle
- DALI interface for dim light operation (DIMD) – for higher ambient temperatures up to +50°C
- uniform luminous flux option (CL) to keep the light output on same level for – hard coating



Standard Mounting



Schuch Quality - your advantage:

- 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.



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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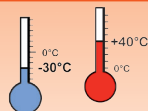
nD8700/ ...



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	nD8700 4803	106	14.410	136	40	A++	HIT/HST 150W	9,6
87000 0001	nD8700 6403	140	19.030	136	40	A++	HIT 250W	9,6

narrow wide beam

87000 0008	nD8700 4803TB	106	14.410	136	40	A++	HIT/HST 150W	9,6
87000 0002	nD8700 6403TB	140	19.030	136	40	A++	HIT 250W	9,6

narrow beam

87000 0014	nD8700 4803T	106	14.410	136	40	A++	HIT/HST 150W	9,6
87000 0013	nD8700 6403T	140	19.030	136	40	A++	HIT 250W	9,6

asymmetrical beam (plane surface floodlight)

87000 0009	nD8700 4803A	106	13.770	130	40	A++	HIT/HST 150W	9,6
87000 0003	nD8700 6403A	140	17.970	128	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.

Explosion protected
Light Fittings

Accessories / Spare Parts

Article no.	Type	
90120 9000	2531	ex-protected plastic cable gland M20 x 1,5
90122 9000	2533	ex-protected plastic cable gland M20 x 1,5 with plug
90270 0005	ROB 60/76	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 2,5mm².

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 $L_{70B_{10}}$ 100.000 h at max. ambient temperature.

ECG: 220 - 240V, 50-60Hz, life cycle 100.000h. Surge voltage resistance 10kV, excess temperature protection, overload and short circuit protection.

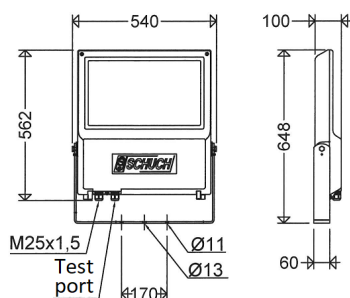
Note: Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited.

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

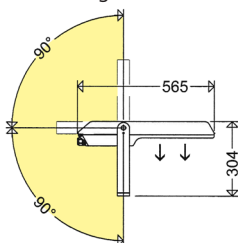
Optionen:

- light output reduction (LR) per 230V control line (dimable)
- DALI interface for dim light operation (DIMD)
- uniform luminous flux option (CL) to keep the light output on same level for

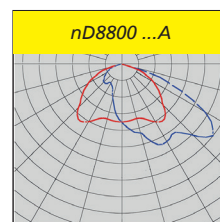
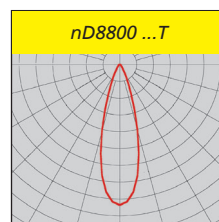
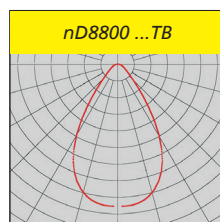
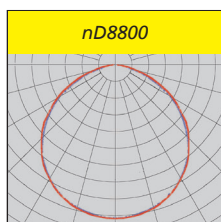
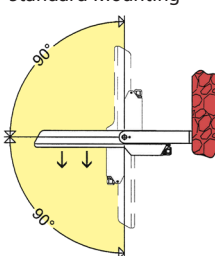
- the whole life cycle
- for higher ambient temperatures up to +50°C
- hard coating



Swivel range



Standard Mounting



Schuch Quality - your advantage:

- 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.



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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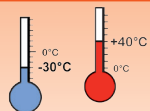
nD8800/ ...



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	nD8800 6403	140	19.560	140	40	A++	HIT 250W	15,9
88000 0007	nD8800 12803	280	37.620	134	40	A++	HIT 400W	17,1

narrow wide beam

88000 0002	nD8800 6403TB	140	19.560	140	40	A++	HIT 250W	15,9
88000 0008	nD8800 12802TB	198	28.210	142	40	A++	HIE 400W	17,2

narrow beam

88000 0013	nD8800 6403T	140	19.560	140	40	A++	HIT 250W	15,9
88000 0014	nD8800 12802T	198	28.210	142	40	A++	HIE 400W	17,2

asymmetrical beam (plane surface floodlight)

88000 0003	nD8800 6403A	140	18.710	134	40	A++	HIT 250W	15,9
88000 0009	nD8800 12802A	198	26.950	136	40	A++	HIE 400W	17,2

* 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	2537	ex-protected plastic cable gland M25 x 1,5
90119 9000	2539	ex-protected plastic cable gland M25 x 1,5 with plug
90270 0005	ROB 60/76	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:

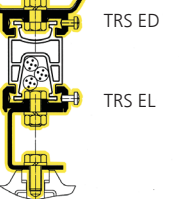
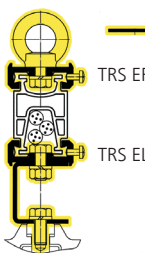
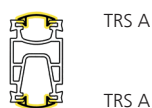
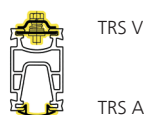
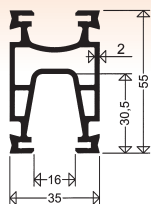
For each length of a light fitting only one suspension point is required.

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 2000...

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

Schuch Quality - your advantage:

- 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

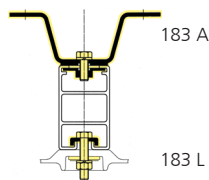
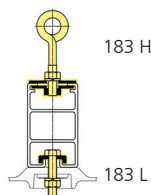
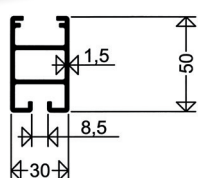
AL...

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



Through wiring Systems for Explosion-Protected Light Fittings

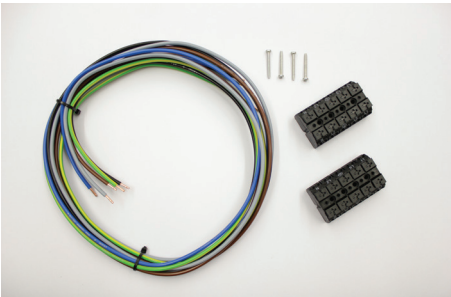
For all fittings installed in a continuous row. Through wiring system with 2 multipole terminals which are fixed inside the light fitting.
(Since retrofitting the through wiring system on site is subject to special regulations in regard to hazardous areas, we do recommend a factory-made through-wiring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

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

Note:

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

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



Factory-made through wiring system

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

Example: Type e840..

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

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

Through-wiring system for retrofit

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

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



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

Applications:

Hazardous areas of zones 1, 21 and 2, 22

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



Explosion-Protected Plugs System SolConeX Series 4210...

Applications:

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

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	4210/306	16A	200-250V	2P + PE	up to 2 x 6,0 mm ²	0,38
41050 0008	4210/506	16A	200-415V	3P + N + PE	up to 2 x 6,0 mm ²	0,50



Explosion-Protected Installation Switches Series 8040...

Applications:

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

Design:

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

Connection terminals:

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

Cable entry:

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

Electrical Data

Rated Voltage 690V AC, 220V DC
Switching capacities

AC-1	16A	690V
AC-15	16A	415V
AC-3	8A	500V
AC-3	4A	690V
DC-1	10A	24V
DC-1	6A	60V
DC-1	10A	110V ¹⁾
DC-1	10A	220V ²⁾

Number of poles: 2-pole

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

8040/.

for voltages up to 690 V



II 2 G Ex de IIC
T6 Gb

II 2 D Ex tb IIIC
T80°C Db

IP65



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

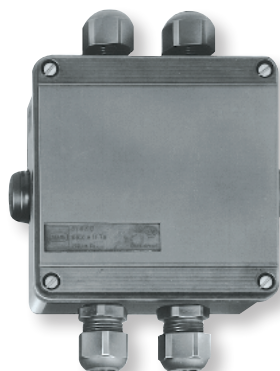
Rated current: max. 16A

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

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

Explosion protected
Light Fittings

Explosion-Protected Junction Box Series 8118...



Applications:

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

Design:

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

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

2x6.0 mm².

Cable entry:

8118/4:

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

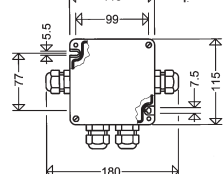
8118/6:

6 cable glands M25 x 1,5

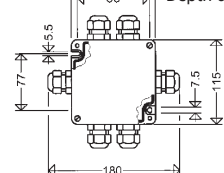
Mounting system:

See dimensional drawings.

8118/4 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	8118/4	4 x M25 x 1,5	0,57
81180 0002	8118/6	6 x M25 x 1,5	0,61



Waterproof Light Fittings

Quality knows no compromises

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

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

Numerous excellent references in all industry branches witness SCHUCH's innovative strength, competence and reliability. Our customers appreciate the proverbial high quality of SCHUCH products for over 100 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.

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.

2006

Production of a waterproof light fitting according to IFS standard designed for food and beverage industries.

2007

Industry's first waterproof light fitting for unprotected outdoor installation.



LED-TECHNOLOGY

2007

Introduction of first waterproof LED light fittings (low power compact light fittings).

+65 °C, that is designed to be used in climatic zones with extreme temperature conditions and fluctuations.

2011

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

2016/17

Launch of LUXANO Basic with innovative DOB (driver on board).

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.

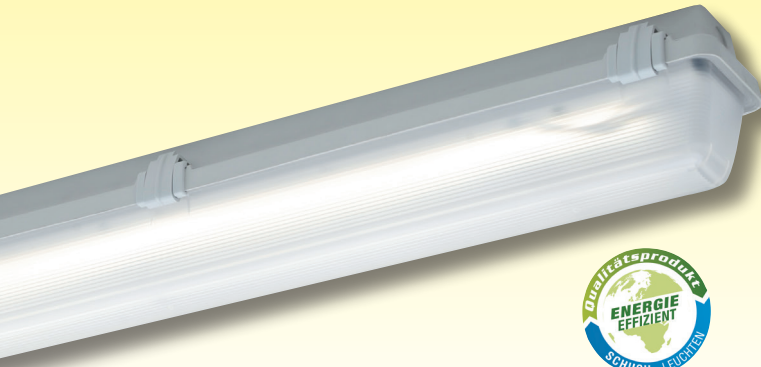
2015/16

First LED light fitting series for a wide temperature range of -40°C to

Product	Series	Page
Light Fittings with diffuser		
Series 161/162...	161/162...	38-46
• with DALI interface	... DIMD	39
• dimmable via „Corridor Mode“	... DIMC	39
• with integrated motion detector	... SENS	40
• with narrow-wide optics	... T/TB	40
• for high ambient temperatures	... H50	40
• for low ambient temperatures	... T40	41
• for wide temperature ranges	... T40/H	41
• for unprotected outdoor installation	... AUS	41
• for food industry areas	... IFS	42
• for food industry areas	... LM	42
• variable setting of the luminous flux	... VARIO	44
• for unprotected outdoor installation	... VARIO AUS	45
• for food industry areas	... VARIO LM	46
Series 144...	144...	47-48
<i>Extremely robust Central Locking System</i>		
• for unprotected outdoor installation	... AUS	48
Series 163/164... Generation 2	163/164... G2	49-52
• with DALI interface	... DIMD	50
• dimmable via „Corridor Mode“	... DIMC	50
• with integrated motion detector	... SENS	51
• for food industry areas	... IFS	51
Series LUXANO BASIC	167...	53
Series 164KL... Generation 2	164KL... G2	54
<i>small polyester light fittings</i>		
Series 130/131...	130/131...	55
<i>small PC light fittings</i>		
Oval-shaped light fittings		
Series 3610...	3610...	56
Compact LED Fitting		
Series 3611...	3611...	57
Tubular Light Fittings		
TUBEO	110...	58-59
<i>dust- and pressure water-tight tube light fitting</i>		
• for high ambient temperatures	... H50	59
Sheet Steel Light Fittings		
Series 190...	190...	60-63
<i>compact light fittings</i>		61
Series 192...	192...	61
<i>low profile light fittings</i>		
Series 181/182...	181/182...	61
<i>steep roof light fittings</i>		
Series 188...	188...	62
<i>for rooms with high exposure to dust</i>		
Vandal Proof Light Fittings		
Series 140...	140...	64
Carrier Rails		
	TRS 2000	65
	AL	65
	TRS 1000	66
Through Wirings		
	DV	66



Dustproof/Waterproof LED Light Fitting with Diffuser Series 161/162.. L..



Application:

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: Injected, 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:

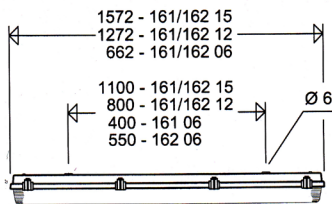
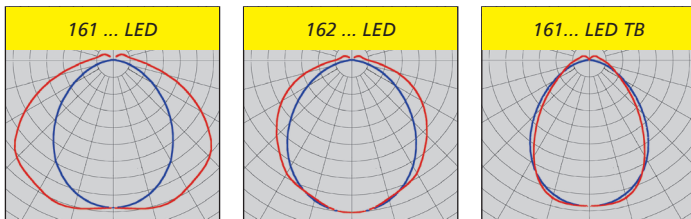
LED: Linear modules 4,000K, CRI > 80, L₈₀ > 50,000h at max. ambient temperature

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

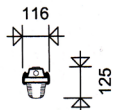
Ambient temperature: -20°C (-40°C for types ...T40) up to ..°C see product table

Options:

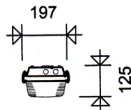
- 6 500K
- high colour rendering index R_a>90 (light colour 940)
- increased protection against corrosive atmospheres or harmful gases, version ER and HR
- for connection to central power supply unit (ZB)
- PC-diffuser, frosted (PC)
- stainless steel clips (KE)
- with through wiring system



Series161...



Series 162...



SCHUCH quality - Your advantage:

- 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
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161/162...



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

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

with high luminous flux

16117 0305	161 12L60	1	38	6.030	159	30	A++	2 x 58W	2,7
16117 0306	161 15L75	1	47	7.640	163	30	A++	> 2 x 58W	3,0
16215 0302	162 12L120	2	76	11.800	155	35	A++	2 x 80 bzw. 3 x 58W	4,3
16215 0303	162 15L150	2	95	14.940	157	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

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.

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



dimming 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	161 06L12 DIMD	1	10	1.390	139	40	A++	1 x 18W	1,9
16117 0311	161 12L22 DIMD	1	15	2.390	159	40	A++	1 x 36W	2,8
16117 0313	161 15L34 DIMD	1	21	3.440	164	40	A++	1 x 58W	3,1
16117 0320	161 06L20 DIMD	1	16	2.370	148	40	A++	2 x 18W	1,9
16117 0312	161 12L42 DIMD	1	27	4.240	157	40	A++	2 x 36W	2,8
16117 0314	161 15L60 DIMD	1	39	6.160	158	40	A++	2 x 58W	3,1
16117 0315	161 12L60 DIMD	1	39	6.030	155	30	A++	2 x 58W	2,7
16117 0316	161 15L75 DIMD	1	48	7.640	159	30	A++	> 2 x 58W	3,1
16215 0312	162 12L120 DIMD	2	78	11.800	151	35	A++	2 x 80 bzw. 3 x 58W	4,4
16215 0313	162 15L150 DIMD	2	97	14.940	154	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



dimming via „Corridor Mode“

Application:

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.

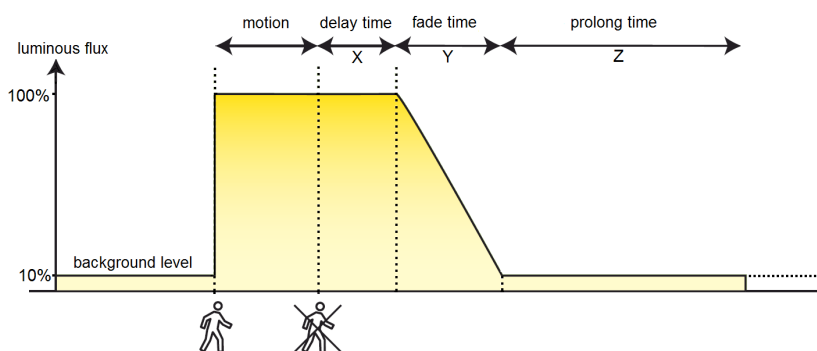


Technical data:

The corridor function allows easy power reduction at a fixed value by means of an ordinary 230V control voltage.

Default settings:

- 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). For some versions the minimum dimming level may be higher due to technical limitations.
- Automatic cutoff deactivated (light fitting never switches off and provides a background illumination of 10%, but can be switched off by user at any time).



Note:

Since the switching capabilities of LED modules and control devices are limited, dimming without switching of the light fitting completely will result in a much longer life of the light fitting.

16117 0420	161 12L22 DIMC	1	15	2.390	159	40	A++	1 x 36W	2,8
16117 0422	161 15L34 DIMC	1	21	3.440	164	40	A++	1 x 58W	3,1
16117 0421	161 12L42 DIMC	1	27	4.240	157	40	A++	2 x 36W	2,8
16117 0423	161 15L60 DIMC	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

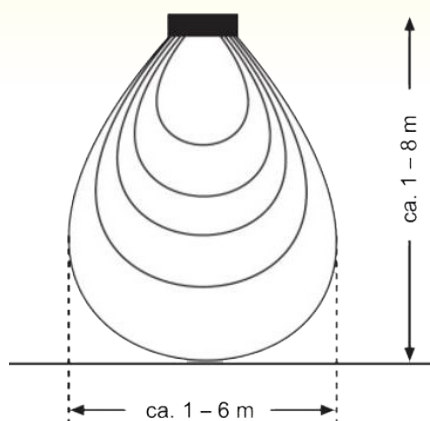
Application:

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). For some versions the minimum dimming level may be higher due to technical limitations.

- Automatic cutoff deactivated (light fitting never switches off and provides a background illumination of 10%, but can be switched off by user at any time).

Parameter setting:

– Potentiometer on the HF sensor

– Infrared remote control (optional)

16117 0697	161 12L22 SENS	1	15	2.390	159	40	A++	1 x 36W	2,9
16117 0699	161 15L34 SENS	1	21	3.440	164	40	A++	1 x 58W	3,2
16117 0698	161 12L42 SENS	1	27	4.240	157	40	A++	2 x 36W	2,9
16117 0700	161 15L60 SENS	1	39	6.160	158	40	A++	2 x 58W	3,2

161/162... TB



narrow-wide beam, optics with 60° angle (TB)

Application:

Illumination for workplaces, aisles, etc.

Design:

Same as standard versions 161/162... LED, but with narrow-wide beam optics with 60° (TB) beam angle.

16117 0604	161 15L60TB	1	39	5.980	153	40	A++	2 x 58W	3,2
16215 0601	162 15L120TB	2	78	11.960	153	40	A++	2 x 80 bzw. 3 x 58W	5,4

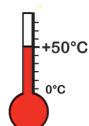
161/162... H50



for high ambient temperatures up to +50°C

Application:

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



16117 0324	161 06L12 H50	1	10	1.390	139	50	A++	1 x 18W	2,0
16117 0334	161 06L12 H50 DIMD	1	10	1.390	139	50	A++	1 x 18W	2,0
16117 0321	161 12L22 H50	1	15	2.390	159	50	A++	1 x 36W	2,7
16117 0331	161 12L22 H50 DIMD	1	15	2.390	159	50	A++	1 x 36W	2,8
16117 0322	161 15L34 H50	1	21	3.440	164	50	A++	1 x 58W	3,0
16117 0332	161 15L34 H50 DIMD	1	21	3.440	164	50	A++	1 x 58W	3,1
16215 0324	162 06L20 H50	1	16	2.370	148	50	A++	2 x 18W	2,5
16215 0334	162 06L20 H50 DIMD	1	16	2.370	148	50	A++	2 x 18W	2,6
16215 0321	162 12L42 H50	1	26	4.440	171	50	A++	2 x 36W	4,3
16215 0331	162 12L42 H50 DIMD	1	26	4.440	171	50	A++	2 x 36W	4,4
16215 0322	162 15L60 H50	1	39	6.590	169	50	A++	2 x 58W	4,8
16215 0332	162 15L60 H50 DIMD	1	39	6.590	169	50	A++	2 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!

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

Application:

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... T40 / H...



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

Application:

Climatic chambers, material container, test benches in the automotive industry, regions with extreme temperature fluctuations etc.

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

161/162... AUS



for applications in unprotected outdoor areas

Application:

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.

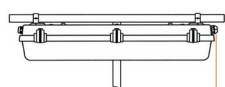
Mounting:

Ceiling and horizontal wall mount or mounting to out-aches, poles, steel structures, catwalks, etc. by means of pipe clamps. For vertical mounting please consult us.

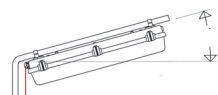
Notes:

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



pressure compensation element



pressure compensation element

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

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 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	38	6.030	159	30	A++	2 x 58W	2,7
16117 0356	161 15L75 AUS	1	47	7.640	163	30	A++	> 2 x 58W	3,0
16215 0352	162 12L120 AUS	2	76	11.800	155	35	A++	2 x 80 bzw. 3 x 58W	4,3
16215 0353	162 15L150 AUS	2	95	14.940	157	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 injected 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

Application:

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

with high luminous flux

16119 0305	161 12L60 IFS	1	38	6.030	159	30	A++	2 x 58W	2,7
16119 0046	161 15L75 IFS	1	47	7.640	163	30	A++	> 2 x 58W	3,0
16219 0302	162 12L120 IFS	2	76	11.800	155	35	A++	2 x 80 bzw. 3 x 58W	4,3
16219 0004	162 15L150 IFS	2	95	14.940	157	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 applications in food areas

Application:

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.



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.

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	161 06L12 LM	1	10	1.390	139	40	A++	1 x 18W	1,8
16119 0001	161 12L22 LM	1	15	2.390	159	40	A++	1 x 36W	2,7
16119 0002	161 15L34 LM	1	21	3.440	164	40	A++	1 x 58W	3,0
16119 0006	161 06L20 LM	1	16	2.370	148	40	A++	2 x 18W	1,8
16119 0003	161 12L42 LM	1	27	4.240	157	40	A++	2 x 36W	2,7
16119 0004	161 15L60 LM	1	39	6.160	158	35	A++	2 x 58W	3,2

with high luminous flux

16219 0001	162 12L85 LM	2	53	8.430	159	40	A++	2 x 54W	4,3
16219 0002	162 15L100 LM	2	73	11.410	156	40	A++	2 x 80W	4,8
16219 0006	162 12L120 LM	2	80	12.650	158	35	A++	2 x 80 bzw. 3 x 58W	4,3
16219 0007	162 15L150 LM	2	100	15.810	158	35	A++	4 x 58W	4,8

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

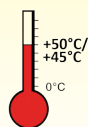
** see notes, power consumption in dimming mode depends on the dimming adjustment!

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... LM H..



for high ambient temperatures up to +45/50°C

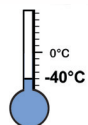


16119 0051	161 12L22 LM H50	1	15	2.390	159	50	A++	1 x 36W	2,8
16119 0052	161 15L34 LM H50	1	21	3.440	164	50	A++	1 x 58W	3,0
16219 0051	162 12L42 LM H50	1	27	4.240	157	50	A++	2 x 36W	4,3
16219 0052	162 15L60 LM H45	1	39	6.160	158	45	A++	2 x 58W	4,8

161/162... 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.

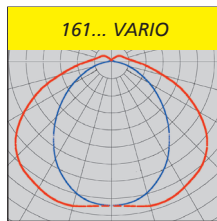
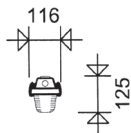
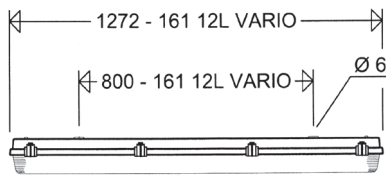
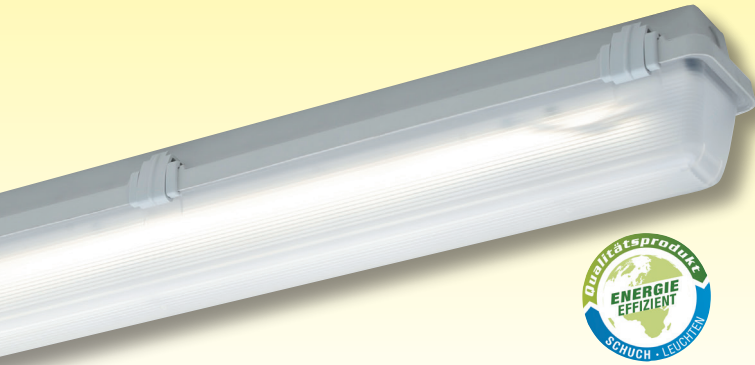
** see notes, power consumption in dimming mode depends on the dimming adjustment!

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 9003	KK/KKS 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



Application:

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: Injected, 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, L₈₀ > 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 +30/35/40/45°C (see type table)

Options:

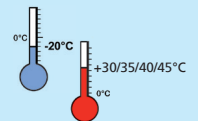
– 6.500K

– with through wiring system

– PC-diffuser frosted (FPC)

SCHUCH quality - Your advantage:

- 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 +30/35/40/45°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 2.390lm and 5.880lm. 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] ***	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 ²⁾	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:

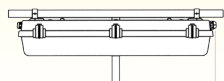
Properties, limitations and details for controlling LED-light fittings:

See "Technical Supplement"

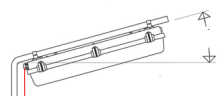
All technical data is relevant at the time of print. Actual technical data can be found in the internet under www.schuch.de.

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

pressure compensation element



pressure compensation element

for applications in unprotected outdoor areas**Application:**

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.

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 ²⁾	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 injected 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

Application:

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 2.300lm and 5.650lm. 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	40	A++	1 x 36W	2,7
		22	3.610 ²⁾	164	40	A++	1 x 58W	
		29	4.510	156	35	A++	2 x 36W	
		39	5.920	152	30	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	
Spare diffuser		
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 ...

Application:

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 2,5mm² possible.

Mechanical installation: 2 suspension eyes with bolts (H8V P) or 2 ceiling brackets (15A P), see accessories.

Technical data:

LED: Linear modules 4,000K, CRI > 80, L₈₀ > 50,000h at max. ambient temperature

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

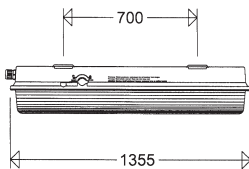
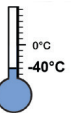
Ambient temperature: -20°C up to see product table

Options:

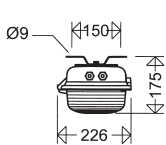
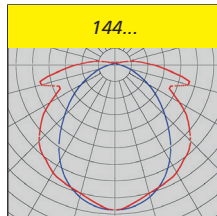
- 6.500K
- dimmable version with DALI interface (DIMD)
- dimmable via „Corridor Mode“ (DIMC)
- with through wiring 2,5 sqmm
- for low ambient tem-

peratures

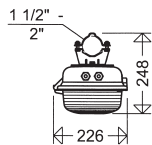
- for connection to group or central battery systems (ZB)
- emergency light version with self-contained battery



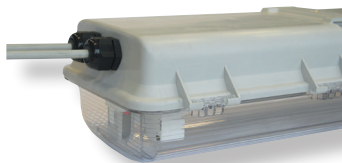
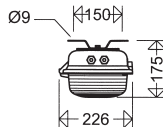
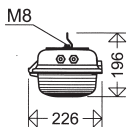
Pipe clamp mounting



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).

Notes:

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

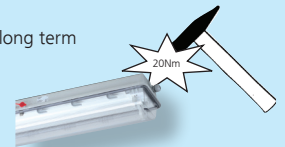
See "Technical Supplement"

All technical data is relevant at the time of print.

Actual technical data can be found in the internet under www.schuch.de.

Schuch Quality - your advantage:

- 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)**



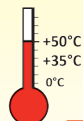
Dustproof/Waterproof
Light Fittings

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	144 12L22	17	2.650	156	50	A++	1 x 36W	6,6
14402 0002	144 12L34	23	3.500	152	45	A++	1 x 58W	6,6
14402 0003	144 12L42	29	4.450	153	40	A++	2 x 36W	6,6
14402 0004	144 12L60	44	6.260	142	35	A++	2 x 58W	6,6



NEW

144 .. AUS



for applications in unprotected outdoor areas

Application:

Unprotected outdoor areas, especially in exposed areas with high mechanical stress (wind), catwalks, stairs, steel constructions, pipe brackets, on buildings, storage tank etc.

Design:

As standard type but with adapter gland with pressure compensation prevents condensation water.

Mounting:

Ceiling and horizontal wall mount or mounting to outreaches, poles, steel structures, catwalks, etc. by means of pipe clamps. When mounting the light fittings on bracket poles or tubular beams/pipes always use original SCHUCH pipe clamps with support.

14402 0011	144 12L22 AUS	17	2.650	156	50	A++	1 x 36W	6,6
14402 0012	144 12L34 AUS	23	3.500	152	45	A++	1 x 58W	6,6
14402 0013	144 12L42 AUS	29	4.450	153	40	A++	2 x 36W	6,6
14402 0014	144 12L60 AUS	44	6.260	142	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



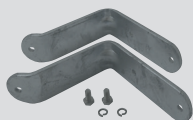
Ceiling brackets 15A P



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

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

Application:

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 silicone 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:

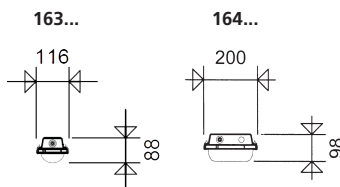
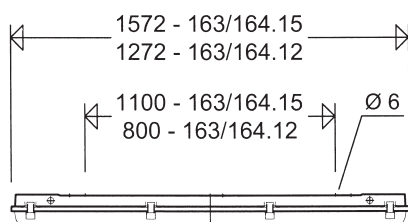
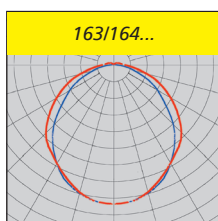
ECG: 220-240V, 50/60Hz, overload and short circuit protection

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

Ambient temperature:	163...	-20°C up to +40°C
	164...	-20°C up to +35°C

Options:

- polycarbonate diffuser stippled clear
- 6.500 K
- stainless steel clips (KE)
- for connection to central power supply unit (ZB)
- with through wiring system



SCHUCH quality - Your advantage:

- 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] *	Energy efficiency class	Substitute for *	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	A++	1 x 36W	2,2
16302 0017	163 15L34G2	1	22	3.370	153	A++	1 x 58W	2,4
16302 0018	163 12L42G2	1	28	4.160	149	A++	2 x 36W	2,2
16302 0019	163 15L60G2	1	40	6.090	152	A++	2 x 58W	2,4

with high luminous flux

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

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

16302 0020	163 12L22G2 DIMD	1	15	2.320	155	A++	1 x 36W	2,3
16302 0021	163 15L34G2 DIMD	1	21	3.330	159	A++	1 x 58W	2,8
16302 0022	163 12L42G2 DIMD	1	27	4.110	152	A++	2 x 36W	2,3
16302 0023	163 15L60G2 DIMD	1	39	5.970	153	A++	2 x 58W	2,8
16415 0018	164 12L90G2 DIMD	2	58	8.990	155	A++	2 x 80W	3,5
16415 0019	164 15L120G2 DIMD	2	80	12.030	150	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



dimmable via „Corridor Mode“

Application:

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.

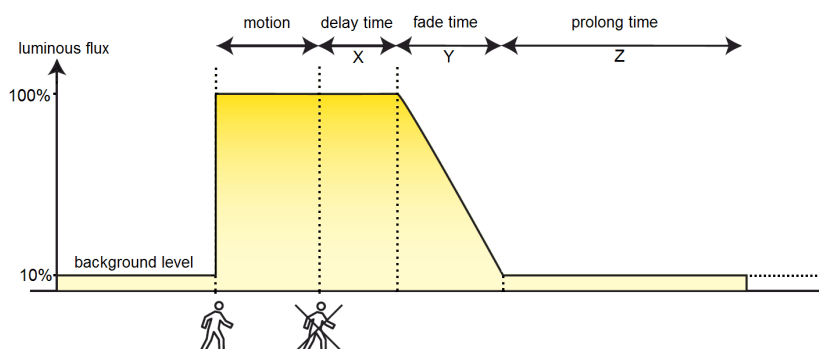


Technical data:

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). For some versions the minimum dimming level may be higher due to technical limitations.
- 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	A++	1 x 36W	2,2
16302 0025	163 15L34G2 DIMC	1	21	3.330	159	A++	1 x 58W	2,8
16302 0026	163 12L42G2 DIMC	1	27	4.110	152	A++	2 x 36W	2,2
16302 0027	163 15L60G2 DIMC	1	39	5.970	153	A++	2 x 58W	2,8
16415 0020	164 12L90G2 DIMC	2	58	8.990	155	A++	2 x 80W	3,5
16415 0021	164 15L120G2 DIMC	2	80	12.030	150	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] *	Energy efficiency class	Substitute for *	Weight [kg] without packing material
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163... G2 SENS



DIMC version with integrated motion detector

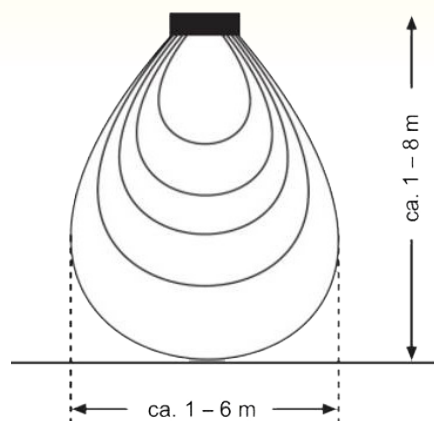
Application:

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

Ambient temperature: -20 °C to +40°C

Factory settings:

- Dimming ramp 30 seconds

- 10% luminous flux when no movement is detected (reduced operation). For some versions the minimum dimming level may be higher due to technical limitations.

- Automatic cutoff deactivated (light fitting never switches off and provides a background illumination of 10%, but can be switched off by user at any time).

Parameter setting:

– Potentiometer on the HF sensor

– Infrared remote control (optional)

16302 0030	163 12L22G2 SENS	1	15	2.320	155	A++	1 x 36W	2,3
16302 0031	163 12L42G2 SENS	1	27	4.110	152	A++	2 x 36W	2,3
16302 0028	163 15L34G2 SENS	1	21	3.330	159	A++	1 x 58W	2,5
16302 0029	163 15L60G2 SENS	1	39	5.970	153	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!

163/164... IFS



for application in food industry areas

Application:

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:

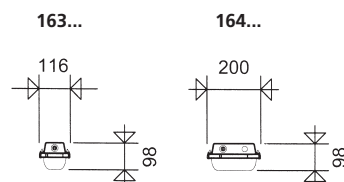
Same as type 163/164 ... L..but:

Diffuser: cover Polycarbonate stippled clear.

Closure clips: Stainless steel (KE), incl. 2 safety clips (KES) to ensure protection against contact.

Notes:

The light fittings are not suitable for cleaning with cleaning agents or disinfectants as well as the cleaning with water-jet units.



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

16319 0001	163 12L22 IFS	1	17	2.620	154	A++	1 x 36W	2,2
16319 0002	163 15L34 IFS	1	22	3.570	162	A++	1 x 58W	2,4
16319 0003	163 12L42 IFS	1	28	4.410	158	A++	2 x 36W	2,2
16319 0004	163 15L60 IFS	1	40	6.460	162	A++	2 x 58W	2,4

with high luminous flux

16419 0001	164 12L90 IFS	2	58	9.530	164	A++	2 x 80W	3,5
16419 0002	164 15L120 IFS	2	80	12.750	159	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	
Spare glasses, PMMA, frosted			Spare glasses, PC, stippled clear		
16711 9001	167 036	for 163 12 L.. G2	16311 9004	163 036 PC	for 163 12L.. IFS
16711 9002	167 058	for 163 15 L.. G2	16311 9005	163 058 PC	for 163 15L.. IFS
16411 9008	164 036 F G2	for 164 12 L.. G2	16411 9004	164 036 PC	for 164 12L.. IFS
16411 9009	164 058 F G2	for 164 15L.. G2	16411 9005	164 058 PC	for 164 15L.. IFS
16311 9006	163 036 F	for 163 12L...			
16311 9007	163 058 F	for 163 15L...			
16411 9006	164 036 F	for 164 12L...			
16411 9007	164 058 F	for 164 15L...			
Fasteners					
90123 9007	163 KK/KKS V08	plastic, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9006	163 KE/KES V08	stainless steel, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9004	163 KKS P	1 pair of safety clips (for LED version), plastic			
90123 9005	163 KES P	1 pair of safety clips (for LED version), stainless steel			
Cable entries					
90063 9000	2511	blanking plug M20			
25610 9000	2561	plastic cable gland M20 x 1,5			
25600 9000	2560	plastic cable gland M25 x 1,5			
Protective guard, powder coated					
90004 0002	SK 140	for 163 12...			
90004 0003	SK 165	for 163 15...			
90004 0005	SK 240	for 164 12...			
90004 0006	SK 265	for 164 15...			
Pipe clamps					
90245 0003	163 RO 112A P	1 1/2", stainless steel, with support (pair) for 163...			
90245 0004	163 RO 2A P	2", stainless steel, with support (pair) for 163...			
90245 0005	164 RO 112A P	1 1/2", stainless steel, with support (pair) for 164...			
90245 0006	164 RO 2A P	2", stainless steel, with support (pair) for 164...			
Attention: Observe the fixing distance when mounting on boom with pipe clamps (boom length!)					
Accessories for ceiling mounting					
90049 0002	183 S	swing hook for chain suspension			
90095 0001	183 DS	stainless steel bracket, with screw M5			
Infrared remote control for SENS-light fittings					
90295 9000	FB SENSOTEC-Mini	Infrared remote control for 163 ... SENS			

LUXANO BASIC

Dustproof/Waterproof LED Light Fitting with Diffuser Series 167 ... BASIC

Application:

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 silicone gasket.

Diffuser: PMMA, modified for higher impact resistance, frosted for glare

limitation.

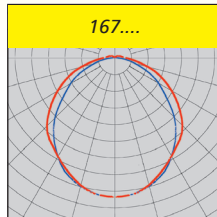
Closure: External plastic clips (KK) incl. 2 safety clips (KKS).

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 holes for ceiling mount. Sealing and pressure disks are supplied with the fitting.



Technical data:

ECG: 230V, 50/60Hz

LED: Linear modules DOB 4,000K, CRI > 80, life time L₇₀ > 50,000h at max. ambient temperature (see notes)

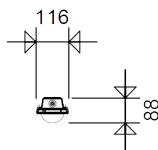
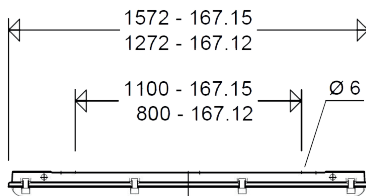
Ambient temperature: -20°C up to +35°C

Options:

- polycarbonate diffuser (stippled clear) – through wiring
- stainless steel clips (KE)

SCHUCH quality - Your advantage:

- homogeneous illumination by using frosted diffusers, no individual light spots visible, comfortable perception of light and excellent glare limitation
- high colour rendering 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, reflector with ECG and LED-modules 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 *	Weight [kg] without packing material
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167... BASIC

16700 0001	167 12L22 BASIC	24	2.910	121	A++	1 x 36W	2,1
16700 0003	167 12L42 BASIC	41	4.590	113	A+	2 x 36W	2,1
16700 0002	167 15L34 BASIC	30	3.760	125	A++	1 x 58W	2,6
16700 0004	167 15L60 BASIC	50	5.820	116	A++	2 x 58W	2,6

* 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		Article no.	Type	
spare glasses, PMMA, frosted			spare glasses, PC stippled clear		
16711 9001	167 036	for 167 12L...	16311 9004	163 036 PC	for 167 12L...
16711 9002	167 058	for 167 15L...	16311 9005	163 058 PC	for 167 15L...
Fasteners					
90123 9007	163 KK/KKS V08	plastic, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9006	163 KE/KES V08	stainless steel, incl. 2 safety clips (packing unit 8 pcs.)			
90123 9004	163 KKS P	1 pair of safety clips (for LED version), plastic			
90123 9005	163 KES P	1 pair of safety clips (for LED version), stainless steel			
Cable entries					
90063 9000	2511	blanking plug M20			
25610 9000	2561	plastic cable gland M20 x 1,5			
Accessories for ceiling mounting					
90049 0002	183 S	swing hook for chain suspension			
90095 0001	183 DS	stainless steel bracket, with screw M5			

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.



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

Application:

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.

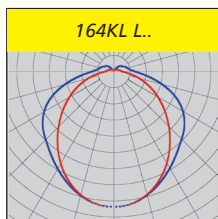
Mounting system: 2 holes for ceiling mounting. Sealing and pressure disks are supplied inside the fitting.

Technical data:

LED: Line modules, 4.000K, CRI > 80, life cycle of the LED $L_{80} > 50.000h$.

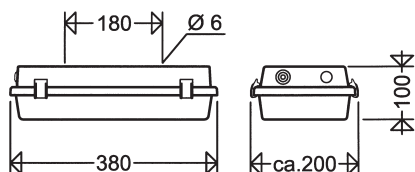
ECG: 220-240V, 50/60Hz, overload and short circuit protection.

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



Options:

- for connection to 24V DC-supply (Type 164KL L08G2)
- for connection to group or central battery systems (see chapter „Emergency light fittings“)
- 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



SCHUCH quality - Your advantage:

- 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
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164KL...

16407 0031	164KL L05G2	4,5	490	109	A++	1 x 8W	1,0
16407 0032	164KL L08G2	8,5	840	99	A++	1 x 11W	1,0
16407 0033	164KL L11G2	10,0	1.150	115	A++	1 x 18W	1,0
16407 0034	164KL L15G2	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.

Accessories / Spare Parts

Article no.	Type	
Spare glasses PMMA frosted		
16413 9006	164 000 F	for 164KL L..
16413 9007	164 000 F G2	for 164KL L.. G2
Cable entries		
90063 9000	2511	blanking plug M20
25610 9000	2561	plastic cable gland M20 x 1,5
25600 9000	2560	plastic cable gland M25 x 1,5
Mounting brackets		
90232 0012	WA 45 ALU	wall bracket 45°
90232 0013	WA 90 ALU	wall bracket 90°
90232 0004	DA	1 pair of ceiling/wall bracket 90°
Fasteners		
90123 9003	163 KK VE08	plastic (packing unit 8)
90123 9002	163 KE VE08	stainless steel (packing unit 8)

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.



Small High Impact Resistant Dust-/Waterproof LED-Light Fittings with Diffusers Series 130/131 ..

Application:

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.

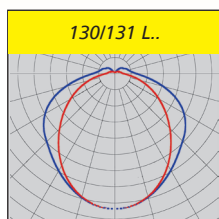
Mounting: 2 borings serve for direct ceiling mounting. Sealing and pressure disks included.

Technical data:

LED: Highpower LED, 4.000K, CRI > 80, life cycle of the LED $L_{80} > 50.000h$ at max. ambient temperature (see notes)

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

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



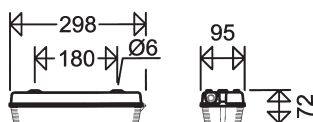
Options:

- for connection to 24V DC supply (types 130/131 L07)
- for connection to group or central battery systems (see chapter „Emergency Light Fittings“)
- cable entry in the back of the housing

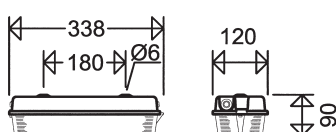
(series 130...)

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

Series 130...



Series 131...



SCHUCH quality - Your advantage:

- solid cover with high wall thickness also at the critical areas (corners)
- 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

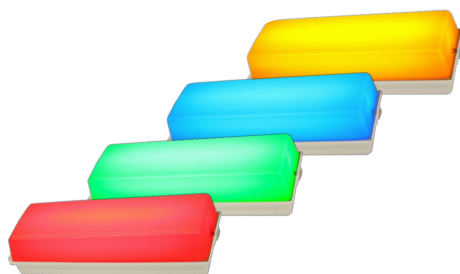
130/131 ..



Article no.	Type	Power consumption [W] *	Luminous flux [lm] *	Luminous efficacy [lm/W] *	Energy efficiency class	substitute for ca. **	Weight [kg] without packing material
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	9,5	1.050	110	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 applications

Notes:

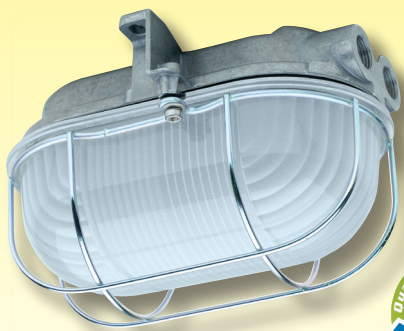
Properties, limitations and details for controlling LED-light fittings:

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.

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



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.

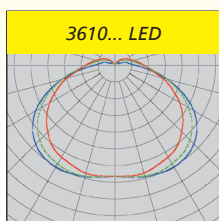
Reflector: Aluminium painted, with LED-Linear modules.

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:

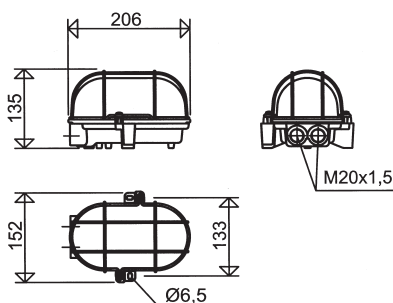
LED: Line modules 4,000K, CRI > 80, life cycle L_{80} > 50,000h at max. ambient temperature (see notes).

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

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

Options:

– coloured LED for signalling applications



SCHUCH Quality - your advantage:

- 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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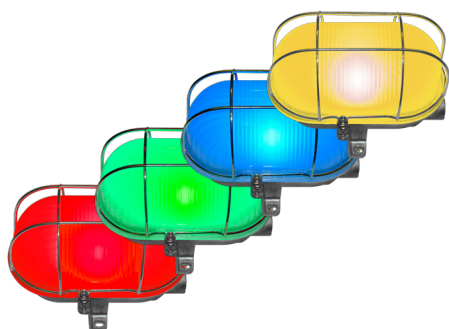
3610...



36102 0031	3610 L04	5,0	550	110	A++	1 x 40W	1,2
36102 0032	3610 L10	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 applications

Notes:

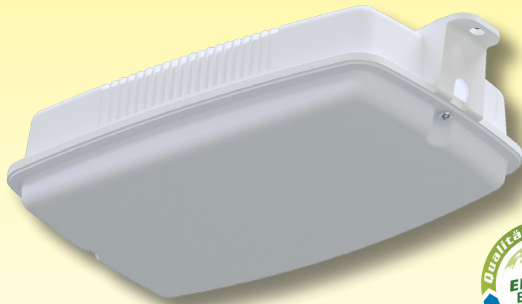
Properties, limitations and details for controlling LED-light fittings:

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.

Accessories / Spare Parts

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



Compact LED Fitting Series 3611 ...

Application:

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:

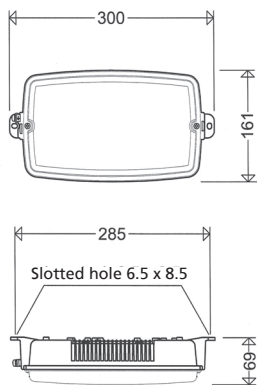
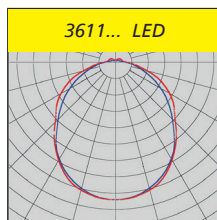
LED: Line modules 4,000K, CRI > 80, L₇₀ > 50.000h at max. ambient temperature (see notes)

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 applications
- PC glass (white opalescent)
- cable looping system on one side
- for outdoor installation
- special version for areas subject to vibrations and shakings (RF)
- for connection to group or central battery systems (ZB)
- for higher/lower ambient temperatures



SCHUCH Quality - Your advantage:

- 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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3611...



36110 0006	3611 L05	5,0	560	112	A++	1 x 8W	1,0
36110 0007	3611 L10	10,0	1.010	101	A++	1 x 18W	1,0

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

** see notes

Dustproof/Waterproof
Light Fittings

Notes:

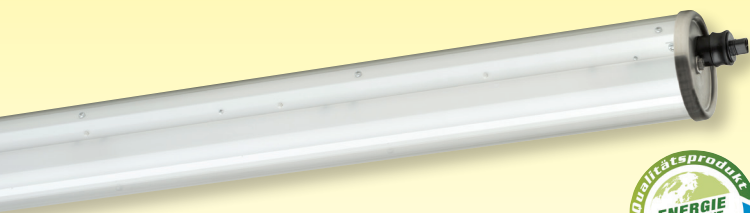
Properties, limitations and details for controlling LED-light fittings:

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.

Accessories / Spare Parts

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



TUBEO Tubular LED Light Fitting Series 110...

Application:

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 („Plug and play“). Plug integrated and internally pre-wired, receptacle included for mains assembly.

Mounting: Supplied with 2 stainless steel pipe clamps.

Technical data:

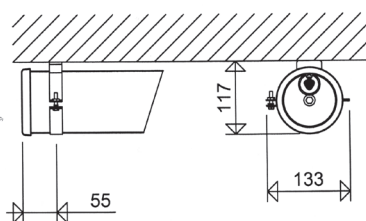
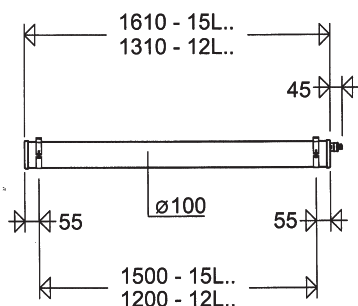
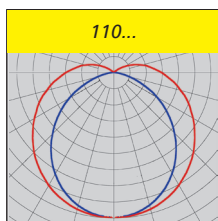
LED: Line modules 4,000K, CRI > 80, L₇₀B₁₀ > 50,000h at max. ambient temperature (see notes)

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 low ambient temperatures
- according to „International Featured Standard Food“
- increased protection against corrosive atmospheres or harmful gases, version ER and HR
- optics with 60° angle (TB)
- for connection to central power supply unit (ZB)
- with through wiring up to 3 x 2,5 mm² or up to 5 x 2,5 mm² (DIMD)



For vertical mounting please consult us!

SCHUCH Quality - Your advantage:

- sturdy and extremely rugged tubular light fitting for application in rough environments
- dust- and pressure water-proof (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
- quick connection without opening the fitting, „plug and play“
- flexible mounting with pipe clamps
- future proof by using standardized LED-modules (Zhaga)

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	4,5
11000 0004	110 15L34	21	3.440	164	45	A++	1 x 58W	5,2
11000 0014	110 15L34 DIMD	21	3.440	164	45	A++	1 x 58W	5,3
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	4,5
11000 0006	110 15L60	39	6.160	158	35	A++	2 x 58W	5,2
11000 0016	110 15L60 DIMD	39	6.160	158	35	A++	2 x 58W	5,3

* 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!

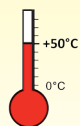
Notes:

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

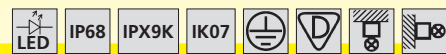
See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under www.schuch.de.

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... H50



for high ambient temperatures up to +50°C

11000 0055	110 12L42 H50	27	4.240	157	50	A++	2 x 36W	4,4
11000 0056	110 15L60 H50	38	6.160	162	50	A++	2 x 58W	5,0

* 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

Accessories / Spare Parts

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

LED-Sheet Steel Light Fittings Series 190/192/181/182/188 ...

Application:

Industrial, tradesmen's and commercial facilities with extreme conditions, aggressive environments (e.g. oil, grease) or high mechanical exposure or for areas with extreme dust appearance, production areas and warehouses, also to be used in food manufacturing, - food processing, - food packaging (IFS-versions), 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, frosted, internal hinge, tiltable.

Reflector: Aluminium painted, with LED-modules and all electrical components screwed to the glass, wired ready for connection.

Central locking: Internal, to be opened

from outside with 5mm allen key.

Terminal: 5-pole terminal, clamping range 2.5 mm² max.

Cable entries: 3 x M20 (190... LED) or 3 x M25 (2 cable gland and 2 blanking plugs), looping the cable at one side possible.

Mounting:

190 ...: 2 fixing holes Ø 9mm, Sealing and pressure disks included. Use mounting screws Ø 6mm.

181/182 ...: For suspension eyes with bolts (H8VP) or ceiling brackets (15AP) (not included), see „Accessories / Spare Parts“.

188 ...: 2 eyebolts (RS6) included.

192 ...: 4 mounting brackets included. Additional mounting material see „Accessories / Spare Parts“.

Technical data:

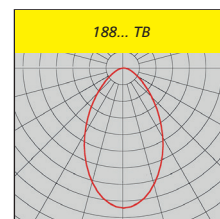
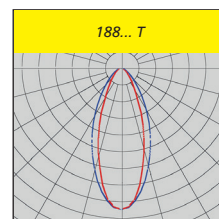
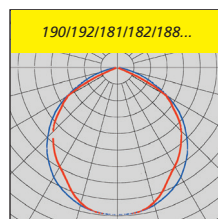
LED: Line-modules 4,000K; CRI>80, life expectancy L₈₀ > 50,000 hours (at max. ambient temperature)

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

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

Options:

- dimmable version with DALI interface (DIMD)
- for connection to central or group battery system (ZB)
- for use in blasting locations or cabins (181/182... SSK)
- in stainless steel, powder coated
- with frame, retrofitable (181/182..., 192...)
- with clear PC pane, according to „International Featured Standard Food“ (181/182... IFS and 192...IFS)



Note:

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

SCHUCH Quality - Your advantage:

- especially suitable for rough industrial application
 - robust, smooth sheet steel housing in triangular shape against dust (series 188), with all latches inside the housing
 - permanent safe closing due to frameless safety glass pane with internal Original SCHUCH-central locking system
- reflector and cover in sandwich design to protect the LED-Modules from mechanical or electrostatic damages due to accidental contact
- highest efficiency due to use of top-quality ECGs and LED modules
- uniform illumination due to frosted safety glass pane, comfortable light perception, excellent glare limitation
- high colour rendering CRI > 80, according to the work place guidelines suitable for nearly all branches
- with „D“-sign, therefore suitable for applications in rooms/locations with increased fire risk due to flammable dusts and fibers.
- future-proof due to use of standardized LED-modules (Zhaga)

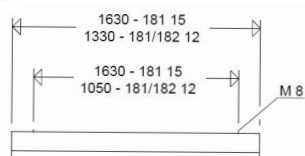
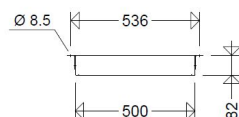
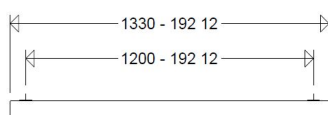
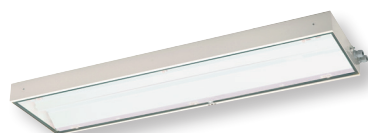
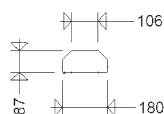
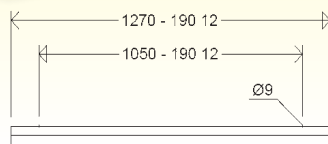


Notes:

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

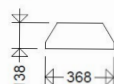
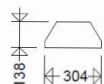
See "Technical Supplement"

All technical data is relevant at the time of print. Actual technical data can be found in the internet under www.schuch.de.



181..

182..



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...



Application:

Housing in sloping roof form. Especially suited for spray booths and spraying rooms (not EX)

19002 0010	190 12L40	1	30	4300	143	60	A++	1 x 36 / 1 x 58	8,5
19002 0011	190 12L60	1	49	6510	133	55	A++	2 x 36 / 2 x 58	8,7

192...



Application: Extremely low profiled housing

especially suited for production areas and warehouses

19105 0014	192 12L160	4	125	16390	131	50	A++	3 x 58 bzw. 4 x 35 / 3 x 49 / 2 x 80	23,7
19105 0015	192 12L250	4	195	26130	134	40	A++	4 x 58 bzw. 4 x 54 / 3 x 80	22,9

181/182...



Application:

Housing in sloping roof form. Especially suited for large spray booths and painting halls (not EX), sand blasting rooms.

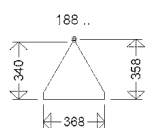
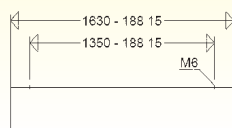
18007 0012	181 15L100	2	79	10820	137	60	A++	2 x 58 bzw. 2 x 49	18,9
18007 0014	182 12L120	3	89	12900	145	55	A++	2 x 58 bzw. 2 x 35 / 1 x 80	17,6

with higher luminous flux for areas with higher illumination requirement

18007 0011	181 12L120	2	86	12580	146	50	A++	3 x 36 bzw. 3 x 35 / 2 x 54	15,3
18007 0015	182 12L190	3	145	19590	135	45	A++	4 x 36 bzw. 3 x 58	18,0

* see notes

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



mounting with eyebolts R56

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
-------------	------	-----------------	--------------------------	-----------------------	----------------------------	-------------------------	-------------------------	----------------------	--------------------------------------

188...



Application:

Triangular shaped housing against dust. for areas with extreme dust appearance, for locations with

increased fire risk due to deposits of flammable dusts and fibres, Erg. agriculture premises (straw storage, carpenter's workshops lumber mill,

cement plant, gypsum storages, etc.)

18705 0017	188 15L240	3	180	24500	136	40	A++	4 x 58 bzw. 4 x 54 / 3 x 80	23,8
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188... TB



narrow wide beam - for light point heights more than 6m

18705 0053	188 15L310TB	3	280	34800	124	35	A++	4 x 80	25,2
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188... T



narrow beam - for light point heights more than 10m

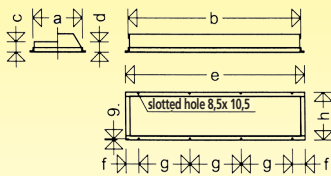
18705 0052	188 15L310T	3	280	34800	124	35	A++	4 x 80	25,2
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* see notes

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



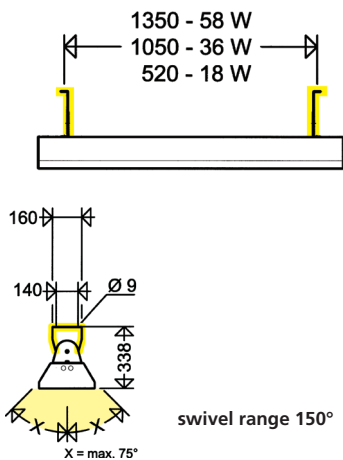
Mounting Dimensions



Installation Frame	a	b	c	d	e	f	g	h
EB 181/36	324	1.350	140		1.396	98	400	370
EB 181/58	324	1.650	140		1.696	48	400	370
EB 182/36	388	1.350	140	80	1.396	98	400	434
EB 182/58	388	1.650	140	80	1.696	48	400	434
EB 192/36	520	1.350		80	1.396	98	400	566
EB 192/58	520	1.650		80	1.696	48	400	566

Note: The additional length of the cable entry must be taken into account when mounting!

series 181/182... with Swivel Arm Mounting System



swivel range 150°

Note:

When using the carrier rail TRS 2000 the mounting accessories for TRS 2000 EX should be used (see section „Ex-light fittings“).

Frame for Recessed Mounting

retrofit possible!

Light fittings of the series 181 / 182... and 191 / 192... can also be adapted for flush mounting in ceilings or walls using a separately supplied frame.

The light fitting is mounted using M5 screws along the long sides (see dimension drawing.).

Article No.	Type	
18091 0002	EB 181/36	for 181 012..
18091 0003	EB 181/58	for 181 015..
18091 0005	EB 182/36	for 182 12.. / 191 12..
18091 0006	EB 182/58	for 182 15.. / 191 15..
18091 0014	EB 192/36	for 192 12..
18091 0015	EB 192/58	for 192 15..

Note:

When inquiring / ordering, please state the type of ceiling in which the light fitting is to be mounted. With certain ceiling designs, it may be necessary to move the cable entry to the rear of the light fitting.

Mounting possibilities:

- in suspended ceilings (standard, when no specification is given).
- in recesses in concrete walls.
- in insulated ceilings acc. to EN 60598

Swivel Arm Mounting System

retrofit possible!

Light fittings series 181 / 182... can also be adapted for swivel mounting using separately supplied swivel arm mounting accessories. The swivel mounting brackets are screwed to the light fitting at the suspension points.

Swivel angle $\pm 75^\circ$ (see dimension drawing).

Article No.	Type	
18092 0001	SWA 181/182	for all lamp lengths, consisting of 2 swivel brackets and screws M8
18092 0002	SWA 181/182 E	stainless steel version for all lamp lengths, consisting of 2 swivel brackets and screws M8

Accessories / Spare Parts

Article No.	Type	
Spare glasses, frosted		
19001 9004	190 28/54 F	for 190 12...
19001 9005	190 35/49/80 F	for 190 15...
18090 9020	181 36-1 F	for 181 12... / 187 12...
18090 9021	181 58-1 F	for 181 15... / 187 15...
18090 9023	182 36-1 F	for 182 12... / 188 12... / 191 12...
18090 9024	182 58-1 F	for 182 15... / 188 15... / 191 15...
19190 9014	192 36-1 F	for 192 12...
19190 9015	192 58-1 F	for 192 15...
Cable entries		
25610 9000	2561	plastic cable gland M20 x 1,5 (190...)
25600 9000	2560	plastic cable gland M25 x 1,5 (181/182..., 187/188..., 191/192...)
25730 9000	2573	threaded blanking plug M20x1,5 (190...)
25720 9000	2572	threaded blanking plug M25x1,5 (181/182..., 187/188..., 191/192...)
Mounting accessories		
... series 190...		
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°
... series 190... and 181/182...		
90001 0002	H8 V P	1 pair suspension eyes with bolts, stainless steel
90000 0002	15A P	1 pair ceiling brackets, galvanized steel
90032 0002	15AV P	1 pair ceiling brackets, stainless steel
... series 181/182...		
26000 0005	WD 45 P	1 pair ceiling brackets, galvanized steel
26000 0006	WD 45 V P	1 pair ceiling brackets, stainless steel
... series 187/188...		
90019 0002	RS 6 P	1 pair ring screw M8
... series 191/192...		
90022 0002	192 Y P	1 pair, Y-cable suspension, adjustable (2-point fixing)
90022 0004	192 YK P	1 pair, Y-chain suspension, adjustable (2-point fixing)
90022 0003	KPS 40	chain pendulum 1m with hook and eyelet for fastening and length compensation (4 pcs. needed per light fitting)



Vandal Proof LED Light Fittings Series 140 ...

Application:

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. 2.5mm².

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:

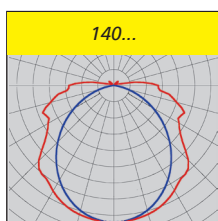
For applications in seaside areas we do recommend a special version with housings made from high grade stainless steel 1.4571 with an additional powder coating.

Technical data:

LED: Line modules 4,000K, CRI > 80, life expectancy L₈₀ > 50,000h at max. ambient temperature (see notes)

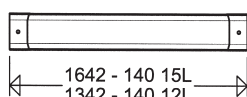
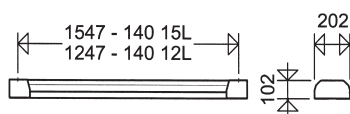
ECG: 220-240V, 50/60Hz, overload and short-circuit protection

Ambient temperature: -20°C bis +35°C

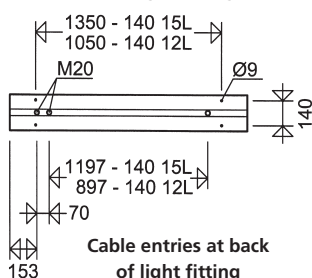


Options:

- 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
- dimming via DALI-interface (DIMD)
- for connection to central power supply unit (ZB)



Mounting holes at the back of light fitting



SCHUCH quality- Your advantage:

- 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



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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140 ...

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

Accessories / Spare Parts

Article No.	Type	
14011 9000	140 036	Spare glass PC clear with stainless steel and caps, for 140 12L.
14011 9001	140 058	Spare glass PC clear with stainless steel and caps, for 140 15L.
90063 9000	2511	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

SCHUCH quality - Your advantage:

- 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.

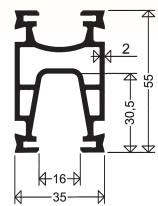
AL...

aluminium carrier rails

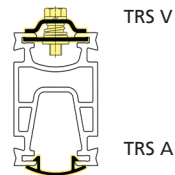
Article no.	Type	Product	Weight ca. [kg]
90005 0001	2 M AL	Alu-rail 2 m long	1,6
90005 0002	3 M AL	Alu-rail 3 m long	2,4
90005 0003	5 M AL	Alu-rail 5 m long	3,9

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



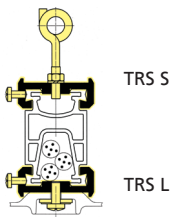
TRS H



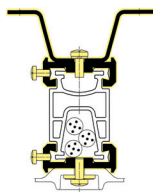
TRS V



TRS A



TRS S

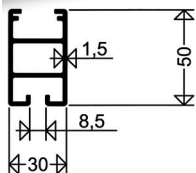


TRS D

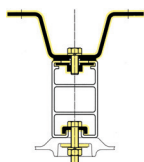


TRS L

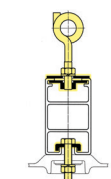
TRS L



183 H

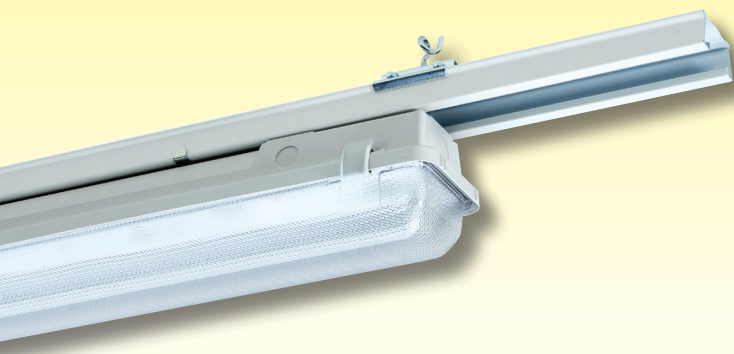


183 A



183 L

183 L



Sheet steel Carrier Rails for Continuous Row Installation Series TRS 1000

Applications:

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)

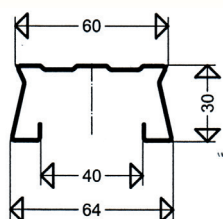
1538mm

Mounting accessories:

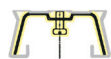
Connection brackets (TRS 1000 V) – to be ordered separately – allows joining the

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



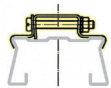
TRS 1000 V



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 (5x1,5mm²) respectively 10A (5x2,5mm²).

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:

1,5mm² up to 10A max.

2,5mm² up to max. 16A max.

In case of loads >8A the maximum permissible ambient temperature is reduced by 5°C.

Light fittings with electronic ballasts do have a high inrush current, hence the maximum permissible number of waterproof LED light fittings with through-wiring system per circuit breaker must be observed.

(see <http://www.schuch.de/en/service/photometric-files>)

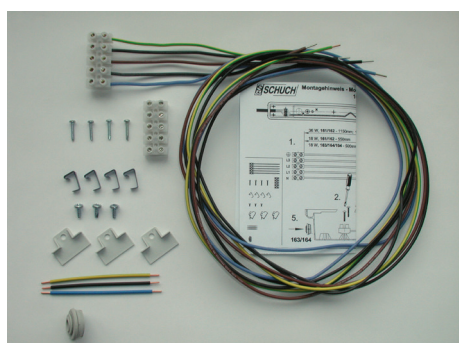
For light fittings in continuous row installation we do recommend factory-fitted through-wiring systems.

For retrofitting our retrofit kits must be used.

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: 5 x 1,5mm² PVC.

5 x 2,5mm² PVC and Silicone through-wiring systems are available on request.



Through-wiring systems for subsequent installation:

Article no.	Type	Product
Universal retrofit kits, suitable for ... 12L.. and ... 15L..		
11831 0013	DV/NS P 5 x 1,5	5 x 1,5mm ² PVC, 105°C
11831 0022	DV/NS P 5 x 2,5	5 x 2,5mm ² PVC, 105°C
11831 0014	DV/NS S 5 x 1,5	5 x 1,5mm ² Silicone, 150°C
11831 0024	DV/NS S 5 x 2,5	5 x 2,5mm ² Silicone, 150°C



High Bay Light 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.

1954

Production of the first industrial reflector-light fitting for high-pressure mercury 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 high-current and strong-magnetic-field applications, such as chlorine electrolysis plants.

2001

Introduction of the first high bay light fitting having a specific triangular shape, which is designed for dust-loaded and polluted environments with a high ambient temperature and high fire hazard.

2003

The range of high bay light fittings has been extended significantly by adding special versions for food industry, blast rooms, applications with high ambient temperatures up to +90°C and many others.



High Bay Floodlights

LED-Technology

Product	Series	Page
High Bay Floodlights		
<i>with 2 point mounting</i>		
DUEVO MID	3301/3302...	70
<i>... for use in galvanising plants</i>	3302... V	73
DUEVO XL MID	3305...	74
<i>with 1 point mounting</i>		
TRIANO Generation 2	3401/3402... G2	76
TRIANO L	3403...	78
TRIANO XL MID	3405...	80

NEW

LED-TECHNOLOGY

2008

Introduction of first LED reflector light fittings.

2013

DUEVO the first especially for LED application developed LED High Bay with 2 point mounting.

2015

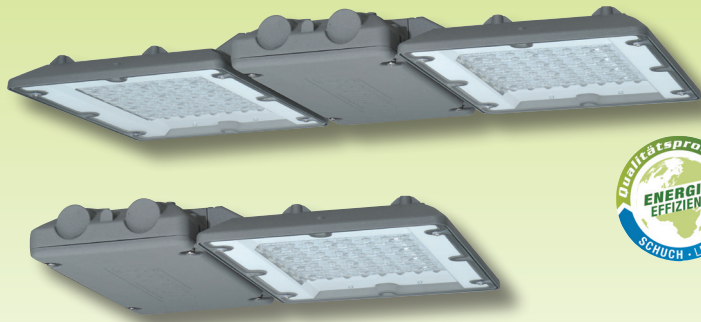
TRIANO Series for 1-point suspension mounting has been added into the range of high bay LED light fittings.

2017/18

Launch of the highly efficient 2. Generation TRIANO.
Completion of TRIANO with TRIANO L and TRIANO XL MID.
Relaunch of our series DUEVO with highly efficient Midpower LED. The proportion of LED grow up to 96%.



Foto: Strahl- und Lackieranlage, Firma Jost, Dülmen



DUEVO MID

LED High Bay Floodlight

Series 3301/3302...

Application:

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

Design:

Two versions are available: 1 (3301...) or 2 (3302...) LED wings.

Housing: Die-cast aluminum, DB 702N (mica-iron paint, grey). **Housing** 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 L70 > 100,000h.

ECG: 220-240V, 50-60Hz, lifetime 100,000h, Surge voltage resistance 4kV, 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: -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 +70°C (H70)

– „D“-marking for rooms with higher fire risk (D)

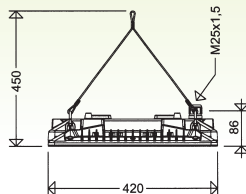
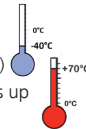
– protection against harmful gases, version XR

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

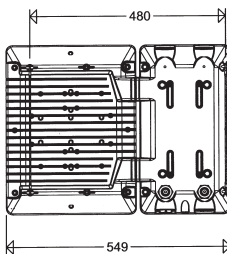
– ball sports proof version

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

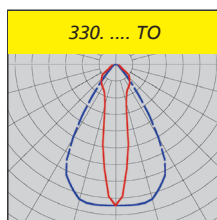
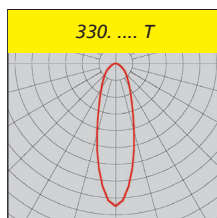
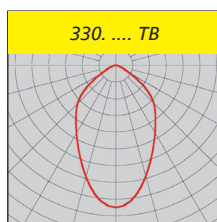
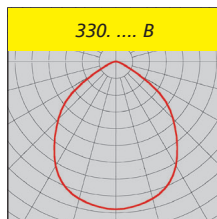
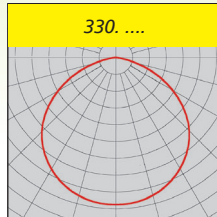
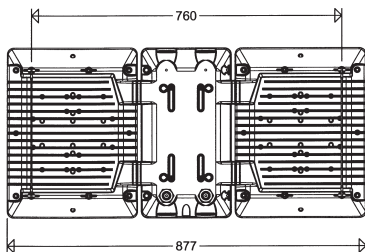
– 3/5-pole connecting (plug and play) plug for electrical connection without accessing the internal terminal block



3301...



3302...






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.

SCHUCH Quality - your advantage:

- high system lifetime of up to 100,000h at maximum 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
- high quality ECG with overvoltage, overload, short-circuit and excess temperature 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)

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++	8,9
33010 0002	3301 L210B	1	•			A++	9,2
33010 0013	3301 L210TB	1		•		A++	9,2
33010 0003	3301 L210T	1			•	A++	9,2
33010 0014	3301 L210TO	1			•	A++	9,2
33010 0200	3301 L210 DIMD	1	•	•		A++	8,9
33010 0201	3301 L210B DIMD	1	•	•		A++	9,2
33010 0212	3301 L210TB DIMD	1	•	•		A++	9,2
33010 0202	3301 L210T DIMD	1	•		•	A++	9,2
33010 0213	3301 L210TO DIMD	1	•		•	A++	9,2

135 20.200 150 HIE 400

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

33010 0004	3301 L110 H60	1	•			A++	8,9
33010 0006	3301 L110B H60	1	•			A++	9,2
33010 0015	3301 L110TB H60	1		•		A++	9,2
33010 0008	3301 L110T H60	1			•	A++	9,2
33010 0203	3301 L110 DIMD H60	1	•	•		A++	8,9
33010 0205	3301 L110B DIMD H60	1	•	•		A++	9,2
33010 0214	3301 L110TB DIMD H60	1	•	•		A++	9,2
33010 0207	3301 L110T DIMD H60	1	•		•	A++	9,2

67 10.800 161 HME 250

33010 0005	3301 L160 H60	1	•			A++	8,9
33010 0007	3301 L160B H60	1	•			A++	9,2
33010 0016	3301 L160TB H60	1		•		A++	9,2
33010 0009	3301 L160T H60	1			•	A++	9,2
33010 0204	3301 L160 DIMD H60	1	•	•		A++	8,9
33010 0206	3301 L160B DIMD H60	1	•	•		A++	9,2
33010 0215	3301 L160TB DIMD H60	1	•	•		A++	9,2
33010 0208	3301 L160T DIMD H60	1	•		•	A++	9,2

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++	14,5
33020 0002	3302 L420B	2	•			A++	14,6
33020 0013	3302 L420TB	2		•		A++	14,6
33020 0003	3302 L420T	2			•	A++	14,6
33020 0014	3302 L420TO	2			•	A++	14,6
33020 0200	3302 L420 DIMD	2	•	•		A++	14,5
33020 0201	3302 L420B DIMD	2	•	•		A++	14,6
33020 0212	3302 L420TB DIMD	2	•	•		A++	14,6
33020 0202	3302 L420T DIMD	2	•		•	A++	14,6
33020 0213	3302 L420TO DIMD	2	•		•	A++	14,6

270 40.400 150 2 x HIE 400

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

33020 0004	3302 L220 H60	2	•			A++	14,5
33020 0006	3302 L220B H60	2	•			A++	14,6
33020 0015	3302 L220TB H60	2		•		A++	14,6
33020 0008	3302 L220T H60	2			•	A++	14,6
33020 0203	3302 L220 DIMD H60	2	•	•		A++	14,5
33020 0205	3302 L220B DIMD H60	2	•	•		A++	14,6
33020 0214	3302 L220TB DIMD H60	2	•	•		A++	14,6
33020 0207	3302 L220T DIMD H60	2	•		•	A++	14,6

134 21.600 161 HIE 400

33020 0005	3302 L320 H60	2	•			A++	14,5
33020 0007	3302 L320B H60	2	•			A++	14,6
33020 0016	3302 L320TB H60	2		•		A++	14,6
33020 0009	3302 L320T H60	2			•	A++	14,6
33020 0204	3302 L320 DIMD H60	2	•	•		A++	14,5
33020 0206	3302 L320B DIMD H60	2	•	•		A++	14,6
33020 0215	3302 L320TB DIMD H60	2	•	•		A++	14,6
33020 0208	3302 L320T DIMD H60	2	•		•	A++	14,6

192 30.000 156 HIT 400

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

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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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.

3301/3302... IFS



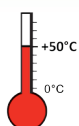
for applications in food industry areas

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

1 LED wing

33010 0010	3301 L210 IFS	1	•			A++	8,9
33010 0011	3301 L210B IFS	1	•			A++	9,2
33010 0017	3301 L210TB IFS	1		•		A++	9,2
33010 0012	3301 L210T IFS	1			•	A++	9,2
33010 0209	3301 L210 DIMD IFS	1	•	•		A++	8,9
33010 0210	3301 L210B DIMD IFS	1	•	•		A++	9,2
33010 0216	3301 L210TB DIMD IFS	1	•	•		A++	9,2
33010 0211	3301 L210T DIMD IFS	1	•		•	A++	9,2

135 20.200 150 HIE 400

2 LED wings

33020 0010	3302 L420 IFS	2	•			A++	14,5
33020 0011	3302 L420B IFS	2	•			A++	14,6
33020 0017	3302 L420TB IFS	2		•		A++	14,6
33020 0012	3302 L420T IFS	2			•	A++	14,6
33020 0209	3302 L420 DIMD IFS	2	•	•		A++	14,5
33020 0210	3302 L420B DIMD IFS	2	•	•		A++	14,6
33020 0216	3302 L420TB DIMD IFS	2	•	•		A++	14,6
33020 0211	3302 L420T DIMD IFS	2	•		•	A++	14,6

270 40.400 150 2 x HIE 400

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

** see notes



Accessories / Spare Parts

Article no.	Type	
33001 9001	3301/010	spare safety glass (for 3302... 2 glasses per fitting necessary)
33001 9006	3301/010 IFS	PC cover for use in the food industry (IFS) (for 3302... 2 covers per fitting necessary)
33001 9010	3301/010 F	PMMA-cover, frosted for glare limitation (for 3302... 2 covers per fitting necessary)
25600 9000	2560	plastic gland M25x1,5
25720 9000	2572	plastic plug M25x1,5
33001 9004	3301/3302 Y P	1 pair of Y-ropes, (2-point-mounting)
33001 9002	3301/3302 D	1 pair of brackets for direct ceiling mounting ¹⁾
33001 9013	3301/3302 SD	vibration absorbing suspension device ¹⁾
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!		
33001 9008	3301 D BS	1 pair of ceiling mountings, ball sports proof for series 3301 ¹⁾
33001 9009	3302 D BS	1 pair of ceiling mountings, ball sports proof for series 3302 ¹⁾
33001 9003	3301 W	1 swivel arm, adjustable, for wall mounting series 3301... ¹⁾
33001 9007	3302 W	1 swivel arm, adjustable, for wall mounting series 3302... ¹⁾

¹⁾ Version Sheet Steel painted. Optional available in stainless steel painted.

NEW

DUEVO MID

LED High Bay Floodlight for use in galvanising plants

Series 3302... V

Application:

Specially developed version for use in galvanizing plants.

Design:

Housing: Die-cast aluminum, DB 702N (mica-iron paint, grey).

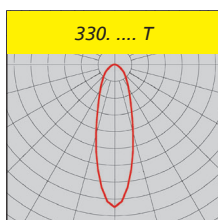
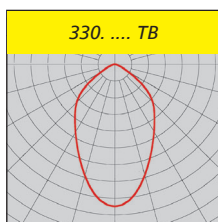
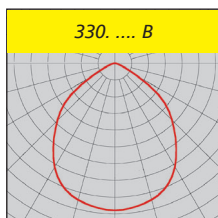
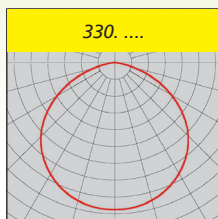
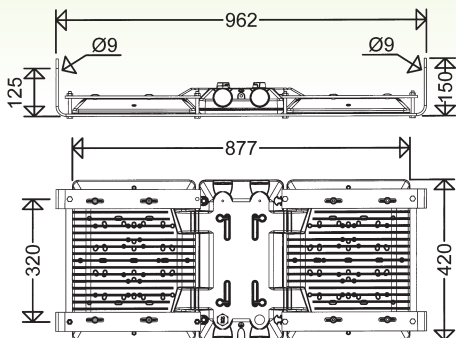
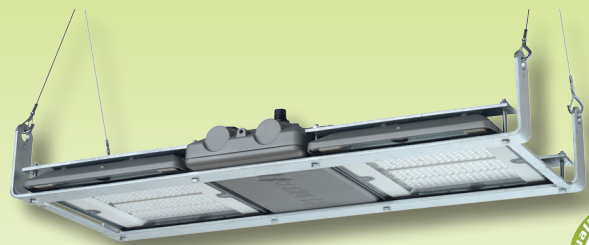
Housing with LED modules, optics behind tempered safety glass (IK08).

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

Light distribution: Wide beam without optic, with optics wide (B), narrow-wide (TB) or narrow beam (T).

Connection: Preinstalled 3-pole (DIMD 5-pole) plug-type connector, plug mounted to the housing, socket included.

Mounting: 4-point suspension.



Technical Data:

LED module: Complying Zhaga, 4,000K, CRI > 80, lifetime L70 > 100,000h.

ECG: 220-240V, 50-60Hz, lifetime 100,000h, Surge voltage resistance 4kV, 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: -20°C up to +50°C

Options:

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

DALI interface (DIMD)

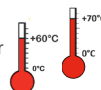
Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire lifetime of the LED-modules.

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)



SCHUCH Quality - your advantage:

- extremely robust special-version
- high system lifetime of up to 100,000h at maximum ambient temperature
- high quality ECG with overvoltage, overload, short-circuit and excess temperature 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.
- 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.

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 *
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3302... V

33020 0100	3302 L420 V	2	•			A++	23,9				
33020 0101	3302 L420B V	2	•			A++	24,0				
33020 0102	3302 L420TB V	2		•		A++	24,0				
33020 0103	3302 L420T V	2			•	A++	24,0				

* 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 Floodlight

Series 3305...

Application:

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

Design:

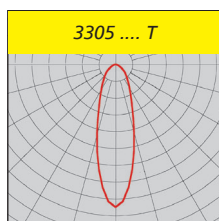
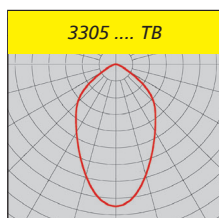
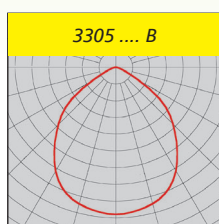
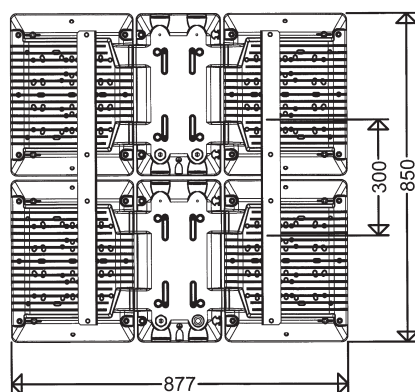
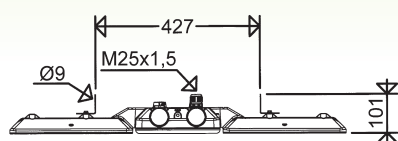
Housing: Die-cast aluminum, DB 702N (mica-iron paint, grey). **4 housings** with LED module, optics behind tempered safety glass (IK08). **2 ECG housings** with

integrated electronic control gear, pre-wired on terminals.

Light distribution: With optics wide (B), Narrow-wide (TB) or narrow beam (T).

Entries: 1 gland and 1 blind plug M25 x 1,5.

Mounting: see Accessories.



Technical Data:

LED module: Complying Zhaga, 4,000K, CRI > 80, lifetime L70 > 100,000h.

ECG: 220-240V, 50-60Hz, lifetime 100,000h, Surge voltage resistance 4kV, 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: -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.

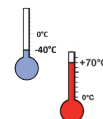
Corridor Mode (DIMC)

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 +70°C (H70)



- „D“-marking for rooms with higher fire risk (D)
- 3/5-pole connecting (plug and play) plug for electrical connection without accessing the internal terminal block

SCHUCH Quality - your advantage:

- 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 overvoltage, overload, short-circuit and excess temperature protection
- 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
- 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.

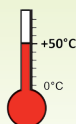


Article no.	Type	Quantity of ECG	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Substitute for *
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3305...



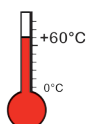
... for ambient temperatures up to +50°C



33050 0050	3305 L840B	4	•				A++	30,3
33050 0058	3305 L840TB	4		•			A++	30,3
33050 0051	3305 L840T	4				•	A++	30,3
33050 0200	3305 L840B DIMD	4	•	•			A++	30,3
33050 0208	3305 L840TB DIMD	4	•		•		A++	30,3
33050 0201	3305 L840T DIMD	4	•			•	A++	30,3

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++	30,3
33050 0059	3305 L440TB H60	4		•			A++	30,3
33050 0054	3305 L440T H60	4				•	A++	30,3
33050 0202	3305 L440B DIMD H60	4	•	•			A++	30,3
33050 0209	3305 L440TB DIMD H60	4	•		•		A++	30,3
33050 0204	3305 L440T DIMD H60	4	•			•	A++	30,3
33050 0053	3305 L640B H60	4	•				A++	30,3
33050 0060	3305 L640TB H60	4		•			A++	30,3
33050 0055	3305 L640T H60	4				•	A++	30,3
33050 0203	3305 L640B DIMD H60	4	•	•			A++	30,3
33050 0210	3305 L640TB DIMD H60	4	•		•		A++	30,3
33050 0205	3305 L640T DIMD H60	4	•			•	A++	30,3

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

3305... IFS



for applications in food industry areas

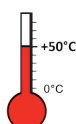
Applications:

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++	30,3
33050 0061	3305 L840TB IFS	4		•			A++	30,3
33050 0057	3305 L840T IFS	4				•	A++	30,3
33050 0206	3305 L840B DIMD IFS	4	•	•			A++	30,3
33050 0211	3305 L840TB DIMD IFS	4	•		•		A++	30,3
33050 0207	3305 L840T DIMD IFS	4	•			•	A++	30,3

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

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

High Bay
Floodlights

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 2nd Generation

LED High Bay

Series 3401/3402... G2

Application:

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

Design:

LED-housing: Robust three-part cast aluminium housing with cooling fins, LED-modules and flat safety glasses (IK09), versions B, TB or T with PC-cover with 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, plug mounted to the housing, socket included.

Mounting: 1-point suspension, eyelet included.

Technical Data:

LED module: 5,000K, CRI > 80, lifetime L₈₀ > 100,000h at 25°C ambient temperature, lifetime L₇₀ > 70,000h at max. ambient temperature (see notes).

ECG: 220-240V, 50-60Hz, lifetime 100,000h, Surge voltage resistance 4kV, 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: -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)

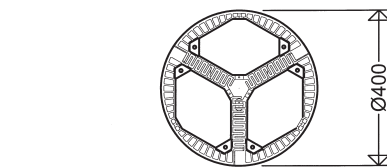
DALI interface (DIMD)

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

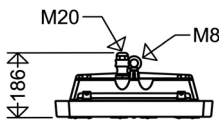
Further Options:

- 4,000K, light-colour 840
- for connection to group or central battery systems (ZB)
- ball sports proof version 
- PC cover for applications in food industry areas (IFS Food)

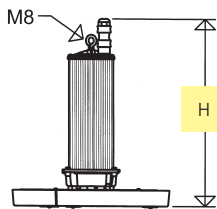
- -sign for locations with increased fire risk (D)
- silicone free
- for high ambient temperatures up to +70°C (H70) 



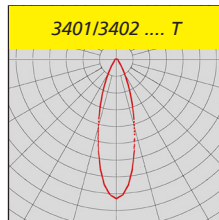
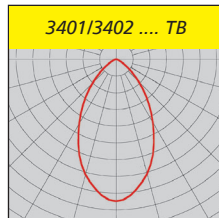
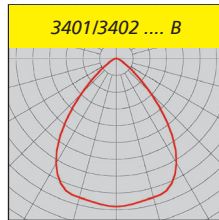
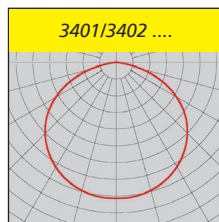
3401 L... G2



3402 L... G2



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



SCHUCH Quality - your advantage:

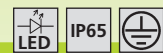
- fast and easy mounting and commissioning due to 1-point suspension and plug-in connection (Plug & Play)
- high quality ECG with overvoltage, overload and short-circuit protection
- optimized thermal management due to segmentation of the LED modules and direct mounting to the housing. Huge heat sink, excellent heat dissipation, excellent convection
- high system lifetime of up to 100,000h 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.

Notes:

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

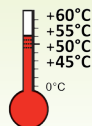
All technical data is relevant at the time of print. Actual technical data can be found in the internet under www.schuch.de.

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

* see notes

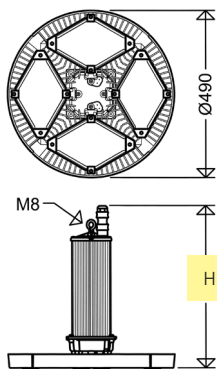
** The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)



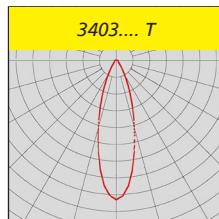
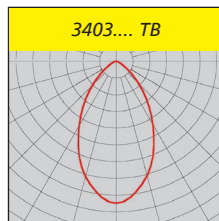
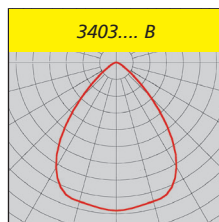
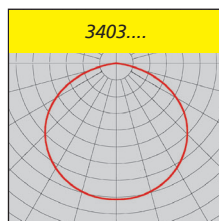
High Bay
Floodlights

Accessories / Spare Parts

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



Series	H [mm]
3403 ...	510
3403 L380.. DIMD	590



TRIANO L LED High Bay Series 3403...

Application:

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

Design:

LED-housing: 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, plug mounted to the housing, socket included.

Mounting: 1-point suspension, eyelet included.

Technical Data:

LED module: 5,000K, CRI > 80, lifetime $L_{80} > 100,000$ h at 25°C ambient temperature, lifetime $L_{70} > 70,000$ h at max. ambient temperature (see notes).

ECG: 220-240V, 50-60Hz, lifetime 100,000h, Surge voltage resistance 4kV, 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: -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)

– PC cover for applications in food industry areas (IFS Food)

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

– silicone free

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



SCHUCH Quality - your advantage:

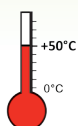
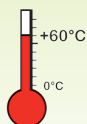
- fast and easy mounting and commissioning due to 1-point suspension and plug-in connection (Plug & Play)
- high quality ECG with overvoltage, overload and short-circuit protection
- optimized thermal management due to segmentation of the LED modules and direct mounting to the housing. Huge heat sink, excellent heat dissipation, excellent convection
- highest efficiency > 100,000h at maximum ambient temperature
- colour reproduction $R_a > 80$, 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.

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

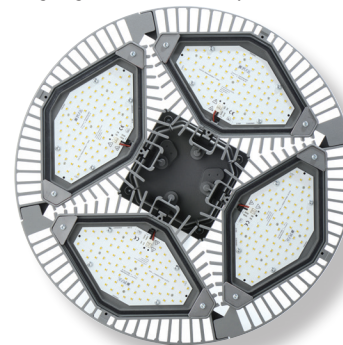
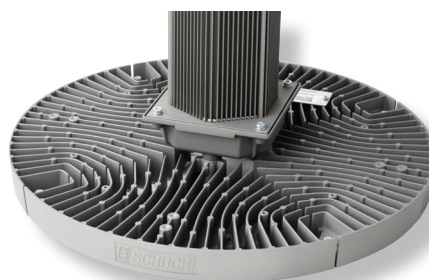


Article no.	Type	Quantity of ECG	Dimmable	Wide beam	Narrow wide beam	Narrow beam	Tmax [°C]	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [W] **	Luminous flux [lm] **	Light output [lm/W]	Substitute for *
3403...										LED	IP65		

34030 0001	3403 L260	2	•				60	A++	8,9	166	27.000	163	HIT400 HIE400 (HS-VG)
34030 0003	3403 L260B	2	•				60	A++	8,9				
34030 0004	3403 L260TB	2		•			60	A++	8,9				
34030 0008	3403 L260T	2			•		60	A++	8,9				
34030 0200	3403 L260 DIMD	2	•	•			60	A++	8,9				
34030 0202	3403 L260B DIMD	2	•	•			60	A++	8,9				
34030 0203	3403 L260TB DIMD	2	•		•		60	A++	8,9	256	39.500	154	HME700 HPI400
34030 0206	3403 L260T DIMD	2	•			•	60	A++	8,9				
34030 0002	3403 L380	2	•				50	A++	8,9				
34030 0005	3403 L380B	2	•				50	A++	8,9				
34030 0006	3403 L380TB	2		•			50	A++	8,9				
34030 0009	3403 L380T	2			•		50	A++	8,9				
34030 0201	3403 L380 DIMD	2	•	•			50	A++	9,7				
34030 0204	3403 L380B DIMD	2	•	•			50	A++	9,7				
34030 0205	3403 L380TB DIMD	2	•		•		50	A++	9,7				
34030 0207	3403 L380T DIMD	2	•			•	50	A++	9,7				

* see notes

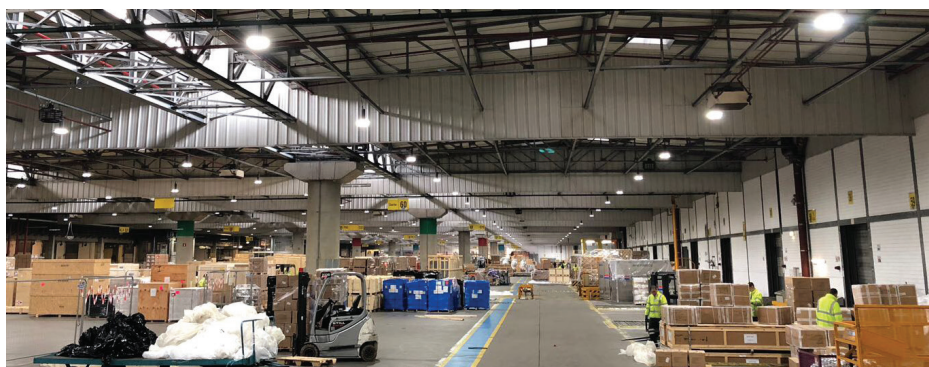
** The given information is for rough orientation only. In each individual case a lighting calculation is necessary. (VG = ballast)



Excellent Thermo-Management by unique Design!

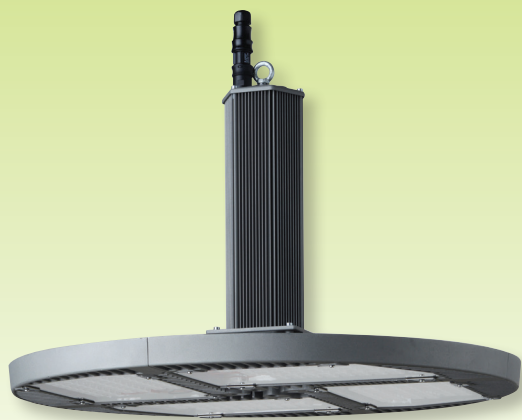
Each LED-Segment is completely surrounded by a high efficient cooling fin block. Such design creates a permanent air flow within the LED-Segments. It cools perfectly and avoids dust sitting on it that could destroy the thermo-management.

Outcome: Operation in high ambient environment plus long life cycle.



Accessories / Spare Parts

Article no.	Type	
34011 9001	3401/010	spare safety glass, for BR 3401/3402... (4 glasses per fitting necessary)
34011 9004	3401/012 B	spare cover PC, wide beam for BR 3401/3402... B 3 (4 glasses per fitting necessary)
34011 9005	3401/012 TB	spare cover PC, narrow-wide beam for BR 3401/3402... TB (4 glasses per fitting necessary)
34011 9006	3401/012 T	spare cover PC, narrow beam for BR 3401/3402... T (4 glasses per fitting necessary)
34011 9002	3401/010 IFS	PC cover, for BR 3401/3402... IFS (4 glasses per fitting necessary)



TRIANO XL MID

LED High Bay

Series 3405...

Application:

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:

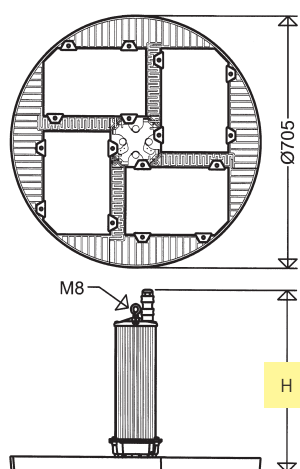
LED-housing: Robust four-part extruded aluminium housing with cooling fins, LED-modules and flat safety glasses (IK 09)

All case parts powder coated in DB702N (mica-iron paint, grey).

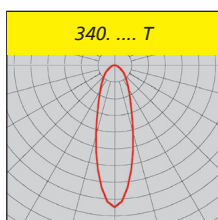
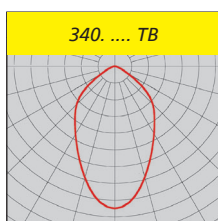
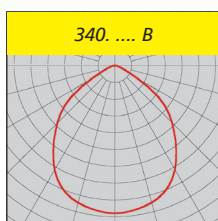
Light distribution: With optics wide (B), narrow-wide (TB) or narrow beam (T).

Connection: Preinstalled plug-type connector. Plug mounted to the housing. Socket included

Mounting: 1-point suspension, eyelet included.



Series	H [mm]
3405 ...	510
3405 L630.. DIMD	590



Technical Data:

LED module: Complying Zhaga, 4,000K, CRI > 80, lifetime L₇₀ > 100,000h.

ECG: 220-240V, 50-60Hz, lifetime 100,000h, Surge voltage resistance 4kV, 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: -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)

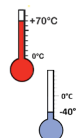
DALI interface (DIMD)

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, e.g. in combination with LED high bay light fittings TRIANO or TRIANO L
- PC cover for applications 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)
- for low ambient temperatures down to -40°C (T40)



SCHUCH Quality - your advantage:

- efficient 1 : 1 - substitute for conventional high bay floodlights with 1 x HME 1000W or 2 x HIT 400W
- fast and easy mounting and commissioning due to 1-point suspension and plug-in connection (Plug & Play)
- high quality, durable ECG with overvoltage, overload, 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)

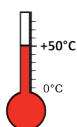
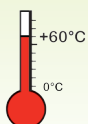
Notes:

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.

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	3405 L340B	3	•				60	A++	19,8	200	32.000	160	HIT 400
34050 0056	3405 L340TB	3		•			60	A++	19,8				
34050 0053	3405 L340T	3			•		60	A++	19,8				
34050 0200	3405 L340B DIMD	3	•	•			60	A++	20,4				
34050 0206	3405 L340TB DIMD	3	•		•		60	A++	20,4				
34050 0203	3405 L340T DIMD	3	•			•	60	A++	20,4	285	45.000	158	HIT 400 HME 700
34050 0051	3405 L470B	3		•			60	A++	19,8				
34050 0057	3405 L470TB	3			•		60	A++	19,8				
34050 0054	3405 L470T	3				•	60	A++	19,8				
34050 0201	3405 L470B DIMD	3	•	•			60	A++	20,4				
34050 0207	3405 L470TB DIMD	3	•		•		60	A++	20,4	405	60.000	148	2 x HIT 400 HME 1000
34050 0204	3405 L470T DIMD	3	•			•	60	A++	20,4				
34050 0052	3405 L630B	3		•			50	A++	19,8				
34050 0058	3405 L630TB	3			•		50	A++	19,8				
34050 0055	3405 L630T	3				•	50	A++	19,8				
34050 0202	3405 L630B DIMD	3	•	•			50	A++	20,4				
34050 0208	3405 L630TB DIMD	3	•		•		50	A++	20,4				
34050 0205	3405 L630T DIMD	3	•			•	50	A++	20,4				

* see notes

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

Accessories / Spare Parts

Article no.	Type	
34011 9011	3405/010	spare safety glass, for BR 3405... (4 glasses per fitting necessary)



Outdoor Light Fittings

LED technology expands the scope

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

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 its 100-year experience, today SCHUCH 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.

1906

Production of first street light fittings for incandescent lamps

1949

Street light fittings for high pressure mercury 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 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

Decorative outdoor light fittings series 544 have been added, SCHUCH has a complete range of technical outdoor LED light fittings.

2016

Launch of Light-Management-System „LIMAS“. A unique remote control system for energy-saving and on-demand control of public and industrial street lighting.

2017

Introduction of the decorative LED-Street-Light-Fittings KONIC, CUPINA and PLANEO

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 new Plane Surface Floodlight / Floodlight FOCO 7600 VARIO follows in short intervals.

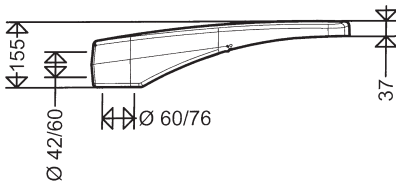
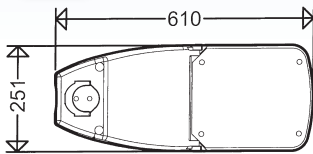
2019

Fit for Future!
With the new RFL-concept the light fittings are prepared for the subsequent use of light management systems.



Product	Series	Page
Technical outdoor light fittings		
Series 48...	48...	84
Series 48... VARIO	48... VARIO	87
Series 47...	47...	89
• for pedestrian crossings or for object protection	... FUE	92
FILOS Vario M	42... VARIO	93
with adjustable luminous flux		
• die-cast aluminium housing	42 AL...	94
• with Highpower-LED	VARIO	
• Polyester housing with	42...	95
Midpower-LED	VARIO M	
Series 46/46AL...	46...	97
Series 43 L...	43 L...	99
Rope supported		
Series 59...	59...	101
Series 49...	49...	103
Polyester Outdoor Light Fitting		
Series 287...	287...	105
Decorative outdoor light fittings		
Pole-Top light fittings		
KONIC	544...	106
CUPINA	556...C	108
PLANEO	557... C	110
Series 541... C OR	541... C OR	112
Series 543... C	543... C	114
Series 553... C	553... C	116
Pendant Luminaires		
Series 564/565...	564/565...	118
Plane Surface Floodlights		
Series 48A...	48A...	120
Series 47A...	47A...	122
FOCO VARIO	7600... A	124
FOCO L	7700... A	126
FOCO XL	7800... A	128
Series 7571/7572/7573... A	7571/2/3... A	130
Floodlights		
FOCO VARIO	7600...	132
FOCO L	7700...	134
FOCO XL	7800...	136
Series 7900...	7900...	138
Pole arm carriers		
		139
Pole-top brackets		
		140
Ready for Light Management Systems 		
		142
Lightmanagement System 		
		144

LED Outdoor Light Fitting with Multi-Purpose Mounting System Series 48...



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.

Application:

Residential streets, by-roads, traffic-calmed zones, parks, walkways and bicycle lanes, pedestrian zones, car parks, gateways

Design:

Housing: Die-cast aluminium, 2-parts, charcoal coloured metallic matt powder coated (almost DB 702). **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.

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, lifetime 100,000h. 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.

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.

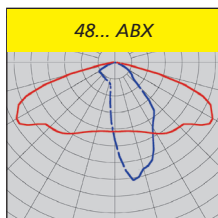
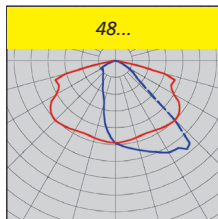
Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming step.

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. 34% lower luminous flux)
- protection class I (SKI)
- optic for M-classes (AB3)
- low glare optic (ABL)
- seawater-resistant version (SWP)
- for connection to group or central battery systems (ZB)
- Ready for Light Management Systems (RFL)
- Light Management System (LIMAS)
- bird deterrence (BD)
- special painting in RAL colours

Schuch Quality – your advantage:

- 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
- 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 WJ* (CL: start of operating life)	Power consumption WJ* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Constant luminous flux function (CL)	Output reduction (LR) **	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		1.300	144			A++	7,5
48001 0045	48 0802	13		1.780	137			A++	7,5
48001 0046	48 0803	18		2.400	133			A++	7,5
48001 0005	48 1601	17		2.510	148			A++	7,6
48001 0006	48 1602	25		3.420	137			A++	7,6
48001 0007	48 1603	35		4.620	132			A++	7,6
48001 0047	48 2401	26		3.850	148			A++	7,6
48001 0048	48 2402	37		5.230	141			A++	7,6
48001 0049	48 2403	53		7.050	133			A++	7,6
48001 0015	48 3201	34		5.040	148			A++	7,7
48001 0016	48 3202	50		6.850	137			A++	7,7
48001 0017	48 3203	70		9.240	132			A++	7,7
48001 0056	48 0802 CL	12	13	1.600	133	•		A++	7,5
48001 0057	48 0803 CL	16	18	2.160	135	•		A++	7,5
48001 0105	48 1601 CL	15	17	2.260	151	•		A++	7,6
48001 0106	48 1602 CL	23	25	3.080	134	•		A++	7,6
48001 0107	48 1603 CL	32	35	4.160	130	•		A++	7,6
48001 0058	48 2401 CL	23	26	3.460	150	•		A++	7,6
48001 0059	48 2402 CL	33	37	4.710	143	•		A++	7,6
48001 0060	48 2403 CL	48	53	6.350	132	•		A++	7,6
48001 0115	48 3201 CL	31	34	4.540	146	•		A++	7,7
48001 0116	48 3202 CL	45	50	6.170	137	•		A++	7,7
48001 0117	48 3203 CL	63	70	8.320	132	•		A++	7,7
48001 0061	48 0802 LR	13		1.780	137		•	A++	7,5
48001 0092	48 0803 LR	18		2.400	133		•	A++	7,5
48001 0025	48 1601 LR	17		2.510	148		•	A++	7,6
48001 0026	48 1602 LR	25		3.420	137		•	A++	7,6
48001 0027	48 1603 LR	35		4.620	132		•	A++	7,6
48001 0068	48 2401 LR	26		3.850	148		•	A++	7,6
48001 0070	48 2402 LR	37		5.230	141		•	A++	7,6
48001 0078	48 2403 LR	53		7.050	133		•	A++	7,6
48001 0035	48 3201 LR	34		5.040	148		•	A++	7,7
48001 0036	48 3202 LR	50		6.850	137		•	A++	7,7
48001 0037	48 3203 LR	70		9.240	132		•	A++	7,7

* see notes

** 44% Rated input power with 44% luminous flux

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

Also available with output reduction (LA) as well as combinations of these functions (CL LR / CL LA).



Outdoor
Light Fittings

Article no.	Type	Power consumption WJ* (CL: start of operating life)	Power consumption WJ* (end of operating life)	Luminous flux [lm] *	Luminous efficacy [lm/W]	Constant luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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48... ABX



asymmetrical extremely wide beam

48001 0001	48 0801ABX	9		1.300	144			A++	7,5
48001 0011	48 0802ABX	13		1.780	137			A++	7,5
48001 0013	48 0803ABX	18		2.400	133			A++	7,5
48001 0002	48 1601ABX	17		2.510	148			A++	7,6
48001 0012	48 1602ABX	25		3.420	137			A++	7,6
48001 0014	48 1603ABX	35		4.620	132			A++	7,6
48001 0003	48 2401ABX	26		3.850	148			A++	7,6
48001 0004	48 2402ABX	37		5.230	141			A++	7,6
48001 0009	48 2403ABX	53		7.050	133			A++	7,6
48001 0079	48 3201ABX	34		5.040	148			A++	7,7
48001 0080	48 3202ABX	50		6.850	137			A++	7,7
48001 0081	48 3203ABX	70		9.240	132			A++	7,7
48001 0111	48 0802ABX CL	12	13	1.600	133	•		A++	7,5
48001 0113	48 0803ABX CL	16	18	2.160	135	•		A++	7,5
48001 0102	48 1601ABX CL	15	17	2.260	151	•		A++	7,6
48001 0112	48 1602ABX CL	23	25	3.080	134	•		A++	7,6
48001 0114	48 1603ABX CL	32	35	4.160	130	•		A++	7,6
48001 0103	48 2401ABX CL	23	26	3.460	150	•		A++	7,6
48001 0166	48 2402ABX CL	33	37	4.710	143	•		A++	7,6
48001 0109	48 2403ABX CL	48	53	6.350	132	•		A++	7,6
48001 0082	48 3201ABX CL	31	34	4.540	146	•		A++	7,7
48001 0083	48 3202ABX CL	45	50	6.170	137	•		A++	7,7
48001 0084	48 3203ABX CL	63	70	8.320	132	•		A++	7,7
48001 0031	48 0802ABX LR	13		1.780	137		•	A++	7,5
48001 0033	48 0803ABX LR	18		2.400	133		•	A++	7,5
48001 0022	48 1601ABX LR	17		2.510	148		•	A++	7,6
48001 0032	48 1602ABX LR	25		3.420	137		•	A++	7,6
48001 0034	48 1603ABX LR	35		4.620	132		•	A++	7,6
48001 0023	48 2401ABX LR	26		3.850	148		•	A++	7,6
48001 0024	48 2402ABX LR	37		5.230	141		•	A++	7,6
48001 0029	48 2403ABX LR	53		7.050	133		•	A++	7,6
48001 0086	48 3201ABX LR	34		5.040	148		•	A++	7,7
48001 0087	48 3202ABX LR	50		6.850	137		•	A++	7,7
48001 0091	48 3203ABX LR	70		9.240	132		•	A++	7,7

* see notes

** 44% Rated input power with 50% luminous flux

Also available with output reduction (LA) as well as combinations of these functions (CL LR / CL LA).

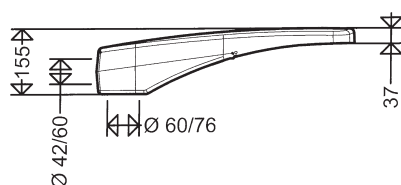
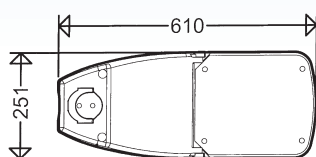


Accessories / Spare Parts

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

NEW

LED Outdoor Light Fitting with variable setting of the luminous flux Series 48... VARIO



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.

Application:

Residential streets, by-roads, arterial roads, bike- and sidewalk, traffic-calmed zones, car parks and factory roads etc.

Design:

Housing: Die-cast aluminium, 2-parts, charcoal coloured metallic matt powder coated (almost DB 702). **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.

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, lifetime 100,000h. 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.

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.

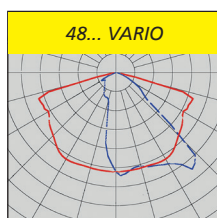
DALI interface (DIMD)

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).

Further Options:

- 3,000K, light colour 730 (ca. 8% less light output)
- 1,800K, light colour 518 „Amber“ (ca. 34% less light output)
- protection class I (SKI)
- asymmetrical beam (A), Plane Surface Floodlight
- optic for M-classes (AB3)
- low glare optic (ABL)
- Optic asymmetric extremely wide beam (ABX)
- seawater resistant version (SWP)
- for connection to group or central battery systems (ZB)
- bird deterrence (BD)
- special painting in RAL colours



Schuch Quality – your advantage:

- 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)
- simple, fast, tool-free setting 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 surge voltage resistance reliable due to overload, short circuit and over temperature protection
- 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.
- future proof by using standardized LED-modules (Zhaga)

Article No.	Type	Power consumption [W]*	Luminous flux [lm] ^{1) *}	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 2,510lm and 4,620lm (Version L50) or 5,040lm and 9,240lm (Version L100). Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

48001 0703	48 L50 VARIO	17	2.510	148	A++	HME 80, HST 50	7,6
		18	2.680 ²⁾	149	A++	HME 125	
		22	3.110	141	A++	2 x HME 80, HST 70	
		35	4.620	132	A++	2 x HME 125	
48001 0750	48 L100 VARIO	34	5.040	148	A++	2 x HME 125	7,7
		46	6.550	142	A++	HST 100	
		54	7.460 ²⁾	138	A++	HME 250	
		70	9.240	132	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

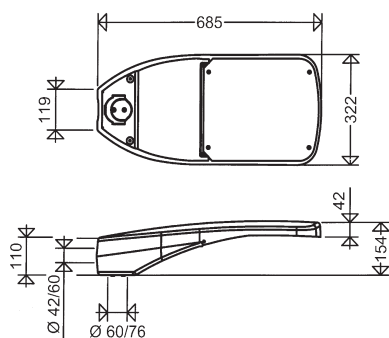
Article No.	Type	
90113 0003	HA 16	visor to avoid backwards luminous flux for 48 L50
90113 0005	HA 32	visor to avoid backwards luminous flux for 48 L100
48002 9000	48/010	flat safety glass cover



Now more efficient and more powerful!



standardized by Deutsche Bahn AG



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.

LED Outdoor Light Fitting with Multi-Purpose Mounting System Series 47...

Application:

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.

Electro kit: Carrying all electrical components, mains connection terminal as isolating plug connection completely removable.

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, lifetime 100,000h. 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.

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)

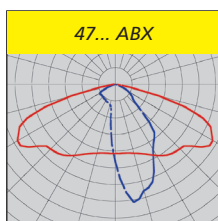
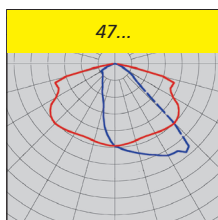
Constant luminous flux function (CL): Luminous flux is kept on a constant level over the entire lifetime of the LED-modules.

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. 34% 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)
- for illumination of ship locks
- seawater-resistant version (SWP)
- Ready for Light Management Systems (RFL)
- Light Management System (LIMAS)
- bird deterrence (BD)
- special painting in all RAL colours



Schuch Quality – your advantage:

- ECG with surge voltage resistance, reliable due to overload, short-circuit and excess temperature 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)

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]	Uniform luminous flux function (CL)	Output reduction (LR)	Energy efficiency class	Weight [kg] (without packing material)
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47...



asymmetrical wide beam

47000 0003	47 3201	34		5.240	154			A++	10,2
47000 0009	47 3202	50		7.130	143			A++	10,2
47000 0004	47 3203	70		9.610	137			A++	10,2
47000 0005	47 4801	52		7.840	151			A++	10,2
47000 0010	47 4802	75		10.650	142			A++	10,2
47000 0047	47 4803	106		14.290	135			A++	10,2
47000 0007	47 6401	69		10.430	151			A++	10,3
47000 0011	47 6402	99		14.120	143			A++	10,3
47000 0048	47 6403	140		18.860	135			A++	10,3
47000 0063	47 3201 CL	31	34	4.720	152	•		A++	10,2
47000 0070	47 3202 CL	45	50	6.410	142	•		A++	10,2
47000 0064	47 3203 CL	63	70	8.650	137	•		A++	10,2
47000 0065	47 4801 CL	47	52	7.060	150	•		A++	10,2
47000 0071	47 4802 CL	68	75	9.580	141	•		A++	10,2
47000 0066	47 4803 CL	95	106	12.860	135	•		A++	10,2
47000 0067	47 6401 CL	62	69	9.390	151	•		A++	10,3
47000 0072	47 6402 CL	89	99	12.710	143	•		A++	10,3
47000 0068	47 6403 CL	126	140	16.970	135	•		A++	10,3
47000 0013	47 3201 LR	34		5.240	154		•	A++	10,2
47000 0019	47 3202 LR	50		7.130	143		•	A++	10,2
47000 0014	47 3203 LR	70		9.610	137		•	A++	10,2
47000 0015	47 4801 LR	52		7.840	151		•	A++	10,2
47000 0020	47 4802 LR	75		10.650	142		•	A++	10,2
47000 0049	47 4803 LR	106		14.290	135		•	A++	10,2
47000 0017	47 6401 LR	69		10.430	151		•	A++	10,3
47000 0021	47 6402 LR	99		14.120	143		•	A++	10,3
47000 0050	47 6403 LR	140		18.860	135		•	A++	10,3

* see notes

** 44% Rated input power with 50% luminous flux

! Also available with output reduction (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]	Uniform luminous flux function (CL)	Output reduction (LR)	Energy efficiency class	Weight [kg] (without packing material)
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47... ABX



asymmetrical extremely wide beam

47000 0155	47 3201ABX	34		5.240	154			A++	10,2
47000 0156	47 3202ABX	50		7.130	143			A++	10,2
47000 0408	47 3203ABX	70		9.610	137			A++	10,2
47000 0157	47 4801ABX	52		7.840	151			A++	10,2
47000 0158	47 4802ABX	75		10.650	142			A++	10,2
47000 0159	47 4803ABX	106		14.290	135			A++	10,2
47000 0160	47 6401ABX	69		10.430	151			A++	10,3
47000 0161	47 6402ABX	99		14.120	143			A++	10,3
47000 0166	47 6403ABX	140		18.860	135			A++	10,3
47000 0167	47 3201ABX CL	31	34	4.720	152	•		A++	10,2
47000 0428	47 3202ABX CL	45	50	6.410	142	•		A++	10,2
47000 0427	47 3203ABX CL	63	70	8.650	137	•		A++	10,2
47000 0175	47 4801ABX CL	47	52	7.060	150	•		A++	10,2
47000 0176	47 4802ABX CL	68	75	9.580	141	•		A++	10,2
47000 0177	47 4803ABX CL	95	106	12.860	135	•		A++	10,2
47000 0178	47 6401ABX CL	62	69	9.390	151	•		A++	10,3
47000 0179	47 6402ABX CL	89	99	12.710	143	•		A++	10,3
47000 0180	47 6403ABX CL	126	140	16.970	135	•		A++	10,3
47000 0184	47 3201ABX LR	34		5.240	154		•	A++	10,2
47000 0185	47 3202ABX LR	50		7.130	143		•	A++	10,2
47000 0186	47 3203ABX LR	70		9.610	137		•	A++	10,2
47000 0187	47 4801ABX LR	52		7.840	151		•	A++	10,2
47000 0188	47 4802ABX LR	75		10.650	142		•	A++	10,2
47000 0189	47 4803ABX LR	106		14.290	135		•	A++	10,2
47000 0190	47 6401ABX LR	69		10.430	151		•	A++	10,3
47000 0191	47 6402ABX LR	99		14.120	143		•	A++	10,3
47000 0192	47 6403ABX LR	140		18.860	135		•	A++	10,3

* see notes

** 44% Rated input power with 50% luminous flux

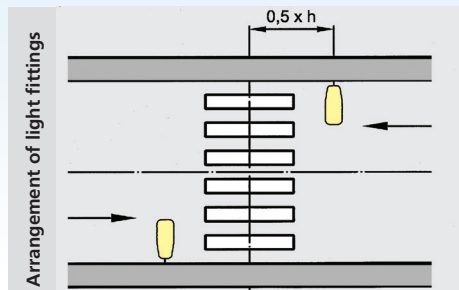
! Also available with output reduction (LA) as well as combinations of these functions (CL LR / CL LA).



Series 47...
seawater-resistant version

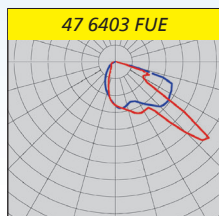
Outdoor
Light Fittings

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... FUE

For pedestrian crossings or for object protection



Application:

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 6403 FUE	140	18.860	135	A++	10,3
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* see notes



Pedestrian crossing illuminated with 1.800K (Amber)



Accessories / Spare Parts

Article no.	Type	
90113 0005	HA 32	visor to avoid backwards luminous flux for 47 32..
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

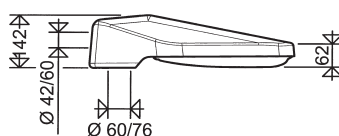
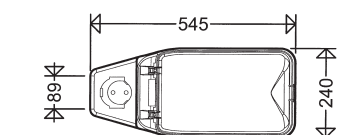
Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

NEW

FILOS LED-Outdoor Light Fitting with variable setting of the luminous flux Series 42 AL... VARIO



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.

Application:

Residential-, side roads und through traffic streets, footpaths and cycle tracks, traffic-calmed areas, factory streets in industrial plants, car parks, gateways etc..

Design :

Housing: Die-cast aluminium, DB 702 N.

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, $R_g > 70$, lifetime $L_{90} > 100,000h$

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

Options:

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

Output reduction:

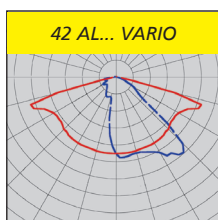
With control phase (LR): For reducing the luminous flux to 50% at times of low traffic density. Control phase (LST) required. Switching via control phase (LST = 230V: 100%; LST = 0V: 50%). Further dimm levels possible.

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.

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 (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. 34% less light output)
- protection class I (SKI)
- asymmetric beam (A), plane surface floodlight-optic
- Optic asymmetric extremely wide beam (ABX)
- seawater resistant version (SWP)
- for connection to group or central battery systems (ZB)
- bird deterrence (BD)
- special painting in RAL colours

SCHUCH Quality – your advantage:

- reduction of the variety of versions, a single luminaire replaces conventional luminaires from 80/125W HME to 50/70W HST or HME 2 x 125W
- simple, fast, tool-free setting 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, short circuit and over temperature 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] ¹⁾ *	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] (without packing material)
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42 AL... VARIO



The luminous flux is variably adjustable to values between 2,660lm and 4,850lm. Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

42003 0001	42AL L50 VARIO	17	2.660	156	A++	HME 80, HST 50	4,9
		18	2.770 ²⁾	154	A++	HME 125	
		22	3.260	148	A++	2 x HME 80, HST 70	
		35	4.850	139	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).

Accessories / Spare Parts

Article no.	Type	
42001 9003	42000 PC	spare glass PC, UV stabilized, clear
90113 0003	HA 16	visor to avoid backwards luminous flux for 42 AL L50

NEW

FILOS

LED-Outdoor Light Fitting

with variable setting of the luminous flux

Series 42... VARIO M

Application:

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-

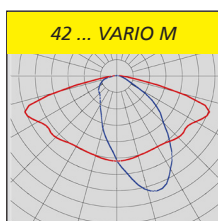
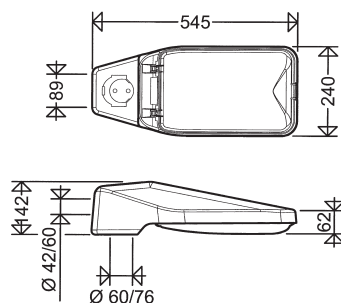
tal contact, isolating plug connection and cable retainer.

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, lifetime 100,000h. 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.

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)
- protection class II (SKII)
- UV-protected painted housing RAL 7035
- 1,800K, light colour 518 „Amber“ (ca. 40% lower luminous flux)

SCHUCH Quality – your advantage:

- reduction of the variety of versions, a single luminaire replaces conventional luminaires from HME 80W to 2 x 125W or HST 50W to 70W
- simple, fast, tool-free setting 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, short circuit and overheating 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 and 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 replaceable 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.

Article No.	Type	Power consumption [W]*	Luminous flux [lm] ^{1) *}	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] (without packing material)
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42... VARIO M



The luminous flux is variably adjustable to values between 2,830lm and 5,350lm. Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.



42002 0001	42 L50 VARIO M	17	2.830	166	A++	HME 80 / HST 50	3,5
		22	3.540 ²⁾	161	A++	HME 125	
		26	4.060	156	A++	2 x HME 80 / HST 70	
		35	5.350	153	A++	2 x HME 125	
42002 0501	42 L50 VARIO M DB703	17	2.830	166	A++	HME 80 / HST 50	3,5
		22	3.540 ²⁾	161	A++	HME 125	
		26	4.060	156	A++	2 x HME 80 / HST 70	
		35	5.350	153	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).



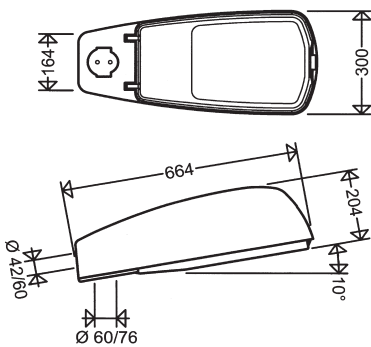
Accessories / Spare Parts

Article no.	Type	
42001 9003	42000 PC	spare glass PC, UV stabilized, clear

Modern LED-Outdoor Light Fitting with Multi-Purpose Mounting System Series 46...



with UV resistant coating



Compact unit with all electrical components,
detachable without tools.

Application:

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: 42Ø x 100mm or 60 x 100mm.

Electrical design:

LED module: Zhaga compliant, 4,000K, $R_g > 70$, lifetime L_{90} 100,000h

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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.

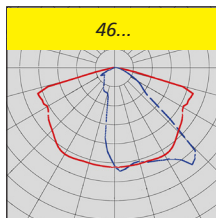
Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming step.

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. 34% lower luminous flux)
- protection class I (SKI)
- Optic asymmetrical extremely wide beam (ABX)
- asymmetric beam (A), plane surface floodlight-optic

SCHUCH Quality – your advantage:

- ECG with surge voltage resistance, reliable due to overload, short-circuit and overheating 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 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.

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]	Constant luminous flux function (CL)	Output reduction (LR)	Energy efficiency class	Weight [kg] (without packing material)
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46...



asymmetrical extremely wide beam

46004 0001	46 1601	17		2.510	148			A++	6,8
46004 0004	46 1602	25		3.420	137			A++	6,8
46004 0002	46 1603	35		4.620	132			A++	6,8
46004 0005	46 3201	34		5.040	148			A++	6,9
46004 0003	46 3202	50		6.850	137			A++	6,9
46004 0031	46 1601 CL	15	17	2.260	151	•		A++	6,8
46004 0034	46 1602 CL	23	25	3.080	134	•		A++	6,8
46004 0032	46 1603 CL	32	35	4.160	130	•		A++	6,8
46004 0035	46 3201 CL	31	34	4.540	146	•		A++	6,9
46004 0033	46 3202 CL	45	50	6.170	137	•		A++	6,9
46004 0011	46 1601 LR	17		2.510	148		•	A++	6,8
46004 0014	46 1602 LR	25		3.420	137		•	A++	6,8
46004 0012	46 1603 LR	35		4.620	132		•	A++	6,8
46004 0015	46 3201 LR	34		5.040	148		•	A++	6,9
46004 0013	46 3202 LR	50		6.850	137		•	A++	6,9

* see notes

** 44% power consumption / 50% luminous flux

! Also available with output reduction (LA) as well as combinations of these functions (CL LR / CL LA).

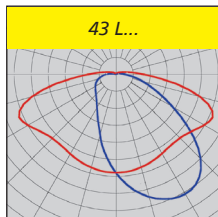
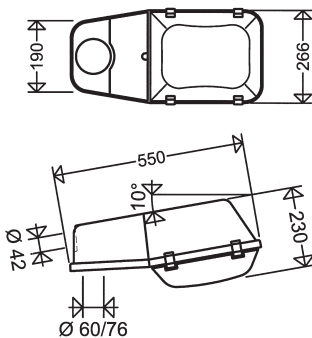


Accessories / Spare Parts

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.

NEW

LED-Outdoor Light Fitting with Universal Mounting System Series 43... L



Application:

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, optic 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, $R_a > 80$, lifetime $L_{80} > 100,000$ h

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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)
- protection class II (SKII)
- pole outreaches Ø 60 x 100mm
- UV-protected painted housing

SCHUCH Quality – your advantage:

- ECG with high surge voltage resistance reliable due to overload, short circuit and overheating 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 replaceable 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.

Article No.	Type	Power consumption [W]*	Luminous flux [lm] *	Luminous efficacy [lm/W]	Energy efficiency class	Substitute for ca. **	Weight [kg] (without packingmaterial)
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43 L...



43006 0001	43 L30	17	2.850	168	A++	HME 80 / HST 50	4,4
43006 0002	43 L40	25	3.950	158	A++	HME 125 / HST 70	4,4
43006 0003	43 L55	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).

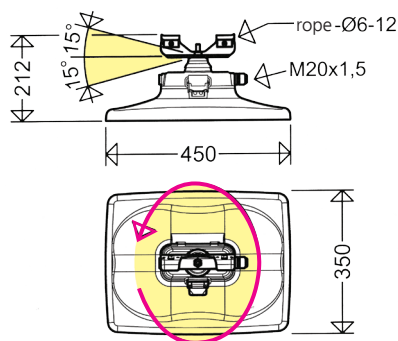


Accessories / Spare Parts

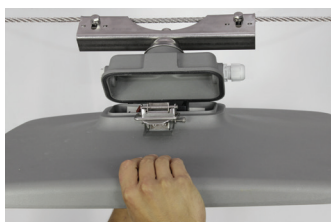
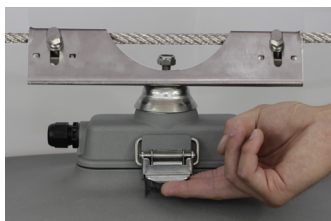
Article no.	Type	
43001 9002	43002 C	spare glass PMMA, frosted



Now more efficient and more powerful!



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.

Rope Supported LED Light Fitting Series 59 ...

Application:

Residential and service roads, 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 $L_{90} > 100,000h$

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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)

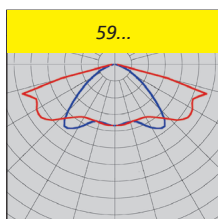
1-10V (DIMA)

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. 34% lower luminous flux)
- protection class II (SKII), with additional ESD protection
- seawater-resistant version (SWP)
- Light Management System (LIMAS)
- 3-point supporting bracket (49/3P)
- special painting in RAL or DB colours



Schuch Quality – your advantage

- ECG with surge voltage resistance, reliable due to excess temperature protection, 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)

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]*	Constant luminous flux function (CL)	Light output reduction (LR)**	Power efficiency class	Weight [kg] (without packing material)
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59...



59001 0021	59 1601	17		2.780	164			A++	6,6
59001 0022	59 1602	25		3.790	152			A++	6,6
59001 0023	59 1603	35		5.130	147			A++	6,6
59001 0001	59 3201	34		5.360	158			A++	7,0
59001 0002	59 3202	50		7.290	146			A++	7,0
59001 0003	59 3203	70		9.840	141			A++	7,0
59001 0024	59 1601 CL	15	17	2.500	167	•		A++	6,6
59001 0025	59 1602 CL	23	25	3.410	148	•		A++	6,6
59001 0026	59 1603 CL	32	35	4.610	144	•		A++	6,6
59001 0004	59 3201 CL	31	34	4.830	156	•		A++	7,0
59001 0005	59 3202 CL	45	50	6.560	146	•		A++	7,0
59001 0006	59 3203 CL	63	70	8.850	140	•		A++	7,0
59001 0027	59 1601 LR	17		2.780	164		•	A++	6,6
59001 0028	59 1602 LR	25		3.790	152		•	A++	6,6
59001 0029	59 1603 LR	35		5.130	147		•	A++	6,6
59001 0007	59 3201 LR	34		5.360	158		•	A++	7,0
59001 0008	59 3202 LR	50		7.290	146		•	A++	7,0
59001 0009	59 3203 LR	70		9.840	141		•	A++	7,0

* see notes

** 44% Rated input power with 50% luminous flux

! Also available with output reduction (LA) as well as combinations of these functions (CL LR / CL LA).



Accessories / Spare Parts

Article no.	Type	
49001 9003	59/010	flat safety glass
49001 9002	49/3P	3-point mounting

Rope Supported LED Light Fitting Series 49 ...

Application:

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.

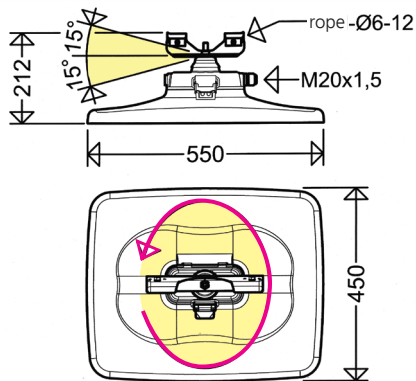
Light distribution: Symmetrical wide beam.

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.



Now more efficient and more powerful!



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.

Electrical design:

LED module: Zhaga compliant, 4,000K, $R_a > 70$, lifetime $L_{90} > 100,000h$

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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.

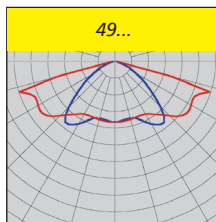
Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming step.

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. 34% lower luminous flux)
- protection class II (SKII), with additional
- ESD protection
- seawater-resistant version (SWP)
- Light Management System (LIMAS)
- 3-point supporting bracket (49/3P)
- special painting in RAL or DB colours

Schuch Quality – your advantage

- ECG with surge voltage resistance, reliable due to excess temperature protection, 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)

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] *	Constant luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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49...



49000 0054	49 6401	69		10.710	155			A++	11,8
49000 0055	49 6402	99		14.540	147			A++	11,8
49000 0056	49 6403	140		19.520	139			A++	11,8
49000 0074	49 6401 CL	62	69	9.640	155	•		A++	11,8
49000 0075	49 6402 CL	89	99	13.080	147	•		A++	11,8
49000 0076	49 6403 CL	126	140	17.570	139	•		A++	11,8
49000 0064	49 6401 LR	69		10.710	155		•	A++	11,8
49000 0065	49 6402 LR	99		14.540	147		•	A++	11,8
49000 0066	49 6403 LR	140		19.520	139		•	A++	11,8

* see notes

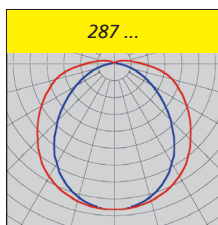
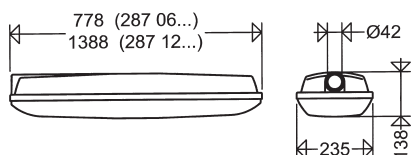
** 44% Rated input power with 50% luminous flux

Also available with output reduction (LA) as well as combinations of these functions (CL LR / CL LA).



Accessories / Spare Parts

Article no.	Type	
49001 9001	49/010	flat safety glass
49001 9002	49/3P	3-point mounting



LED-Polyester Outdoor Light Fitting Series 287...

Application:

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, lifetime 100,000h. 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.

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)

SCHUCH Quality – your advantage:

- ECG with high surge voltage resistance protection reliable due to overload, short circuit and over temperature 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)
287...    Wind load area A = 0,18m² (287 06L) A = 0,32m² (287 12L)						
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

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.

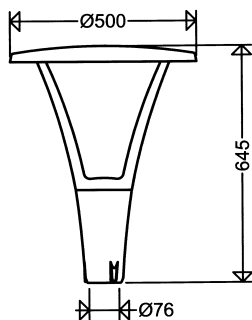
Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

Accessories / Spare Parts

Article no.	Type	
28701 9003	28706L	spare glass for 287 06L..
28701 9004	28712L	spare glass for 287 12L..



Now more efficient and more powerful!!



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.

KONIC LED Pole-Top Light Fitting Series 544...

Application:

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 DB 702N (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 $L_{90} > 100,000h$

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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)

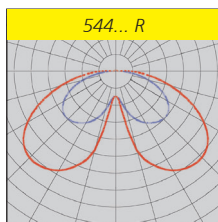
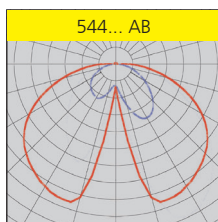
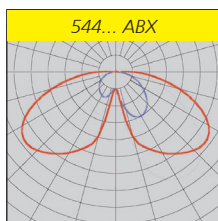
1-10V (DIMA)

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) – protection class I (SKI)
- 1,800K, light colour 518 „Amber“ (ca. 34% lower luminous flux) – seawater-resistant version (SWP)
- with increased luminous flux
- special coating in RAL colours



Schuch Quality – your advantage:

- 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
- 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
- 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]	Constant luminous flux function (CL)	Light output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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544... ABX



asymmetrical extremely wide beam

54400 0001	544 0801ABX	9	1.200	133	A++	9,5
54400 0002	544 0802ABX	13	1.640	126	A++	9,5
54400 0003	544 0803ABX	18	2.220	123	A++	9,5
54400 0004	544 1601ABX	17	2.400	141	A++	9,6
54400 0005	544 1602ABX	25	3.270	131	A++	9,6
54400 0006	544 1603ABX	35	4.410	126	A++	9,6
54400 0007	544 2401ABX	26	3.600	138	A++	9,7
54400 0008	544 2402ABX	37	4.890	132	A++	9,7
54400 0009	544 2403ABX	53	6.600	125	A++	9,7

544... AB



asymmetrical wide beam distribution

54400 0104	544 1601AB	17	2.400	141	A++	9,6
54400 0105	544 1602AB	25	3.270	131	A++	9,6
54400 0106	544 1603AB	35	4.410	126	A++	9,6
54400 0107	544 3201AB	34	4.790	141	A++	9,8
54400 0108	544 3202AB	50	6.510	130	A++	9,8

544... R



symmetrical circular beam

54400 0201	544 0801R	9	1.200	133	A++	9,6
54400 0202	544 0802R	13	1.640	126	A++	9,6
54400 0203	544 0803R	18	2.220	123	A++	9,6
54400 0204	544 1601R	17	2.400	141	A++	9,7
54400 0205	544 1602R	25	3.270	131	A++	9,7
54400 0206	544 1603R	35	4.410	126	A++	9,7
54400 0207	544 2401R	26	3.600	138	A++	9,7
54400 0208	544 2402R	37	4.890	132	A++	9,7
54400 0209	544 2403R	53	6.600	125	A++	9,7

*see notes

**44% Rated input power with 50% luminous flux

Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

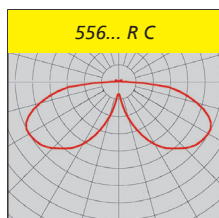
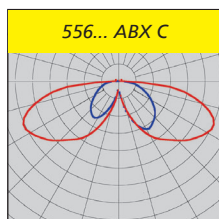
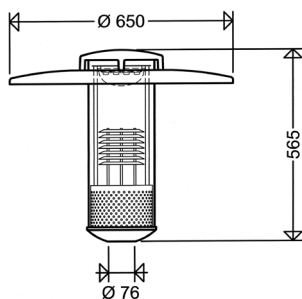


Accessories / Spare Parts

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..



Picture: Special paint colour jet black (RAL 9005)



without frosted cover



without louver stack (C OR)

CUPINA Pole-Top LED-Light Fitting Series 556...

Application:

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 DB 702N (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).

Optic 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 $L_{90} > 100,000h$

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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
- 1,800K, light colour 518 „Amber“ (ca. 30% lower luminous flux)
- protection class I (SKI)
- Light Management System (LIMAS)
- seawater-resistant version (SWP)

- without louver stack (OR)
- without frosted cover (appr. 10% higher luminous flux)
- with higher luminous flux
- 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.

Schuch Quality – your advantage

- ECG with high surge voltage resistance, reliable due to overheating, overload and short-circuit protection
- optimal light distribution due to direct beam LED with high efficient optic
- 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)
- 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]*	Uniform luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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556... C



asymmetrical extremely wide beam

11556 0061	556 0802ABX C	13		1.540	118			A++	6,7
11556 0062	556 0803ABX C	18		2.000	111			A++	6,7
11556 0063	556 1601ABX C	17		2.250	132			A++	6,8
11556 0064	556 1602ABX C	25		3.030	121			A++	6,8
11556 0067	556 0802ABX C CL	12	13	1.380	115	•		A++	6,7
11556 0068	556 0803ABX C CL	16	18	1.800	113	•		A++	6,7
11556 0069	556 1601ABX C CL	15	17	2.030	135	•		A++	6,8
11556 0070	556 1602ABX C CL	23	25	2.730	119	•		A++	6,8
11556 0073	556 0802ABX C LR	13		1.540	118		•	A++	6,7
11556 0074	556 0803ABX C LR	18		2.000	111		•	A++	6,7
11556 0075	556 1601ABX C LR	17		2.250	132		•	A++	6,8
11556 0076	556 1602ABX C LR	25		3.030	121		•	A++	6,8

symmetrical circular beam

11556 0079	556 0802R C	13		1.540	118			A++	6,7
11556 0080	556 0803R C	18		2.000	111			A++	6,7
11556 0081	556 1601R C	17		2.250	132			A++	6,8
11556 0082	556 1602R C	25		3.030	121			A++	6,8
11556 0085	556 0802R C CL	12	13	1.380	115	•		A++	6,7
11556 0086	556 0803R C CL	16	18	1.800	113	•		A++	6,7
11556 0087	556 1601R C CL	15	17	2.030	135	•		A++	6,8
11556 0088	556 1602R C CL	23	25	2.730	119	•		A++	6,8
11556 0091	556 0802R C LR	13		1.540	118		•	A++	6,7
11556 0092	556 0803R C LR	18		2.000	111		•	A++	6,7
11556 0093	556 1601R C LR	17		2.250	132		•	A++	6,8
11556 0094	556 1602R C LR	25		3.030	121		•	A++	6,8

* see notes

** 50% luminous flux at 44% power consumption



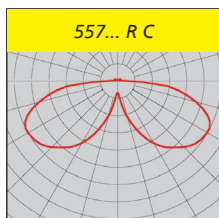
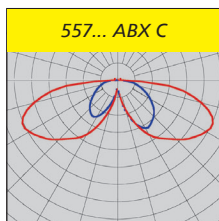
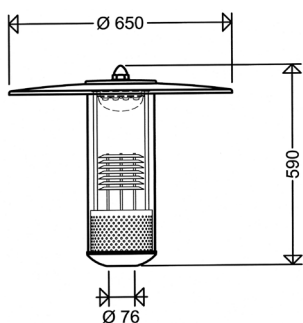
Also available with output reduction (LA) as well as combinations of these functions (CL LR / CL LA).

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



With frosted cover for glare limitation.



PLANE0 Pole-Top LED-Light Fitting Series 557...

Application:

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 DB 702N (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, lifetime 100,000h. 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.

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
- 1,800K, light colour 518 „Amber“ (ca. 30% lower luminous flux)
- protection class I (SKI)
- Light Management System (LIMAS)
- seawater-resistant version (SWP)
- without frosted cover (appr. 10% higher luminous flux)
- without louver stack (OR)
- with higher luminous flux
- special coating in other RAL- and DB-colours



without frosted cover



without louver stack (OR)

Schuch Quality – your advantage

- ECG with high surge voltage resistance, reliable due to overheating, overload and short-circuit protection
- optimal light distribution due to direct beam LED with high efficient optic
- 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)
- 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.

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]*	Uniform luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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557... C



asymmetrical extremely wide beam

55700 0041	557 0802ABX C	13		1.540	118			A++	5,9
55700 0042	557 0803ABX C	18		2.000	111			A++	5,9
55700 0043	557 1601ABX C	17		2.250	132			A++	6,0
55700 0044	557 1602ABX C	25		3.030	121			A++	6,0
55700 0047	557 0802ABX C CL	12	13	1.380	115	•		A++	5,9
55700 0048	557 0803ABX C CL	16	18	1.800	113	•		A++	5,9
55700 0049	557 1601ABX C CL	15	17	2.030	135	•		A++	6,0
55700 0050	557 1602ABX C CL	23	25	2.730	119	•		A++	6,0
55700 0053	557 0802ABX C LR	13		1.540	118		•	A++	5,9
55700 0054	557 0803ABX C LR	18		2.000	111		•	A++	5,9
55700 0055	557 1601ABX C LR	17		2.250	132		•	A++	6,0
55700 0056	557 1602ABX C LR	25		3.030	121		•	A++	6,0

symmetrical circular beam

55700 0059	557 0802R C	13		1.540	118			A++	5,9
55700 0060	557 0803R C	18		2.000	111			A++	5,9
55700 0061	557 1601R C	17		2.250	132			A++	6,0
55700 0062	557 1602R C	25		3.030	121			A++	6,0
55700 0065	557 0802R C CL	12	13	1.380	115	•		A++	5,9
55700 0066	557 0803R C CL	16	18	1.800	113	•		A++	5,9
55700 0067	557 1601R C CL	15	17	2.030	135	•		A++	6,0
55700 0068	557 1602R C CL	23	25	2.730	119	•		A++	6,0
55700 0071	557 0802R C LR	13		1.540	118		•	A++	5,9
55700 0072	557 0803R C LR	18		2.000	111		•	A++	5,9
55700 0073	557 1601R C LR	17		2.250	132		•	A++	6,0
55700 0074	557 1602R C LR	25		3.030	121		•	A++	6,0

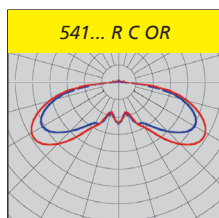
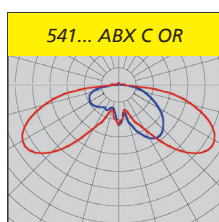
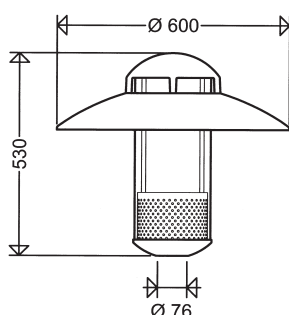
* see notes

** 50% luminous flux at 44% power consumption

Also available with output reduction (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



LED Pole-Top Light Fitting Series 541... C OR

Application:

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 $L_{90} > 100,000h$

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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)

1-10 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
- 1,800K, light colour 518 „Amber“ (ca. 30% lower luminous flux)
- protection class I (SKI)
- Light Management System (LIMAS)
- seawater-resistant version (SWP)

- without frosted cover for glare limitation (appr. 9% higher luminous flux)
- with louver stack (appr. 9% lower luminous flux)
- with higher luminous flux
- special coating in RAL colours



with louver stack (C)



without frosted cover (OR)



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.

Schuch Quality – your advantage

- ECG with high surge voltage resistance, reliable due to overheating, overload and short-circuit protection
- optimal light distribution due to direct beam LED with high efficient optic
- 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)
- 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]	Constant luminous flux function (CL)	Light output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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541... C OR



asymmetrical extremely wide beam

11541 0103	541 0802ABX C OR	13		1.540	118			A++	7,1
11541 0104	541 0803ABX C OR	18		2.000	111			A++	7,1
11541 0105	541 1601ABX C OR	17		2.250	132			A++	7,2
11541 0106	541 1602ABX C OR	25		3.030	121			A++	7,2
11541 0109	541 0802ABX C OR CL	12	13	1.380	115	•		A++	7,1
11541 0110	541 0803ABX C OR CL	16	18	1.800	113	•		A++	7,1
11541 0111	541 1601ABX C OR CL	15	17	2.030	135	•		A++	7,2
11541 0112	541 1602ABX C OR CL	23	25	2.730	119	•		A++	7,2
11541 0115	541 0802ABX C OR LR	13		1.540	118		•	A++	7,1
11541 0116	541 0803ABX C OR LR	18		2.000	111		•	A++	7,1
11541 0117	541 1601ABX C OR LR	17		2.250	132		•	A++	7,2
11541 0118	541 1602ABX C OR LR	25		3.030	121		•	A++	7,2

symmetrical circular beam

11541 0121	541 0802R C OR	13		1.540	118			A++	7,1
11541 0122	541 0803R C OR	18		2.000	111			A++	7,1
11541 0123	541 1601R C OR	17		2.250	132			A++	7,2
11541 0124	541 1602R C OR	25		3.030	121			A++	7,2
11541 0127	541 0802R C OR CL	12	13	1.380	115	•		A++	7,1
11541 0128	541 0803R C OR CL	16	18	1.800	113	•		A++	7,1
11541 0129	541 1601R C OR CL	15	17	2.030	135	•		A++	7,2
11541 0130	541 1602R C OR CL	23	25	2.730	119	•		A++	7,2
11541 0133	541 0802R C OR LR	13		1.540	118		•	A++	7,1
11541 0134	541 0803R C OR LR	18		2.000	111		•	A++	7,1
11541 0135	541 1601R C OR LR	17		2.250	132		•	A++	7,2
11541 0136	541 1602R C OR LR	25		3.030	121		•	A++	7,2

* see notes

** 44% power consumption/ 50% luminous flux

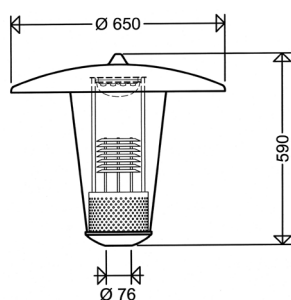
Also available with output reduction (LA) as well as combinations of these functions (CL LR / CL LA).



Outdoor
Light Fittings

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

Application:

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, $R_g > 70$, lifetime $L_{90} > 100,000h$

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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.

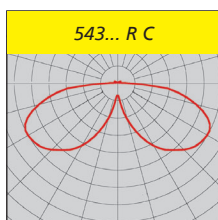
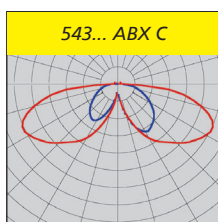
Reduced operation 50% between 22:00 and 4:00h CET or 23.00 and 5.00h CEST, also available with deviating times and with alternative dimming step.

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
- 1,800K, light colour 518 „Amber“ (ca. 30% lower luminous flux)
- protection class I (SKI)
- seawater-resistant version (SWP)
- without frosted cover (appr. 10% higher luminous flux)

- without louver stack OR
- with higher luminous flux
- aluminium roof, standard colour RAL 7035 (series 543... ALU)
- Light Management System (LIMAS)
- special coating in other RAL-colours



without frosted cover



without louver stack (OR)

Schuch Quality – your advantage

- ECG with high surge voltage resistance, reliable due to overheating, overload and short-circuit protection
- optimal light distribution due to direct beam LED with high efficient optic
- 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)
- 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.

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]*	Uniform luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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543... C



asymmetrical extremely wide beam

11543 0033	543 0802ABX C	13		1.540	118			A++	7,0
11543 0046	543 0803ABX C	18		2.000	111			A++	7,0
11543 0010	543 1601ABX C	17		2.250	132			A++	7,1
11543 0055	543 1602ABX C	25		3.030	121			A++	7,1
11543 0047	543 0802ABX C CL	12	13	1.380	115	•		A++	7,0
11543 0048	543 0803ABX C CL	16	18	1.800	113	•		A++	7,0
11543 0036	543 1601ABX C CL	15	17	2.030	135	•		A++	7,1
11543 0038	543 1602ABX C CL	23	25	2.730	119	•		A++	7,1
11543 0049	543 0802ABX C LR	13		1.540	118		•	A++	7,0
11543 0069	543 0803ABX C LR	18		2.000	111		•	A++	7,0
11543 0037	543 1601ABX C LR	17		2.250	132		•	A++	7,1
11543 0018	543 1602ABX C LR	25		3.030	121		•	A++	7,1

symmetrical circular beam

11543 0071	543 0802R C	13		1.540	118			A++	7,0
11543 0072	543 0803R C	18		2.000	111			A++	7,0
11543 0039	543 1601R C	17		2.250	132			A++	7,1
11543 0056	543 1602R C	25		3.030	121			A++	7,1
11543 0073	543 0802R C CL	12	13	1.380	115	•		A++	7,0
11543 0074	543 0803R C CL	16	18	1.800	113	•		A++	7,0
11543 0075	543 1601R C CL	15	17	2.030	135	•		A++	7,1
11543 0045	543 1602R C CL	23	25	2.730	119	•		A++	7,1
11543 0076	543 0802R C LR	13		1.540	118		•	A++	7,0
11543 0077	543 0803R C LR	18		2.000	111		•	A++	7,0
11543 0078	543 1601R C LR	17		2.250	132		•	A++	7,1
11543 0079	543 1602R C LR	25		3.030	121		•	A++	7,1

* see notes

** 50% luminous flux at 44% power consumption

Also available with output reduction (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
90128 9000	DACH 542/43 POL	spare roof, polyester, for light fittings with separate cover nut (up to 2009/2010)
90128 9001	DACH 542/43 POL M10	spare roof, polyester, for light fittings with integrated cover nut (from 2010)
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

Application:

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).

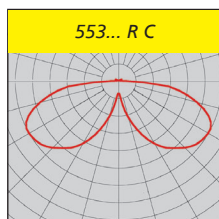
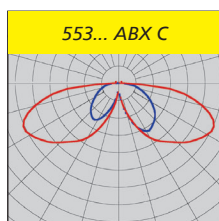
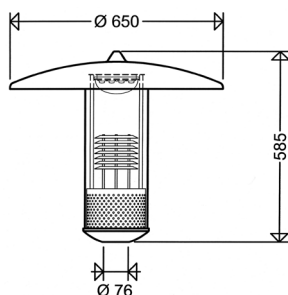
Cover: PMMA, clear, cylindrical.

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).

With frosted cover for glare limitation.



Electrical design:

LED module: Zhaga compliant, 4,000K, $R_a > 70$, lifetime $L_{90} > 100,000h$

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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
- 1,800K, light colour 518 „Amber“ (ca. 30% lower luminous flux)
- protection class I (SKI)
- seawater-resistant version (SWP)
- without frosted cover (appr. 10% higher luminous flux)
- without louver stack OR
- with higher luminous flux
- aluminium roof, standard colour RAL 7035 (series 553... ALU)
- Light Management System (LIMAS)
- special coating in other RAL-colours



without frosted cover



without louver stack (OR)

Schuch Quality – your advantage

- ECG with surge voltage resistance, reliable due to overheating, 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)
- 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.

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]* Uniform luminous flux function (CL)	Output reduction (LR) **	Energy efficiency class	Weight [kg] (without packing material)
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553... C



asymmetrical extremely wide beam

11553 0051	553 0802ABX C	13		1.540	118		A++	7,0
11553 0052	553 0803ABX C	18		2.000	111		A++	7,0
11553 0053	553 1601ABX C	17		2.250	132		A++	7,1
11553 0054	553 1602ABX C	25		3.030	121		A++	7,1
11553 0057	553 0802ABX C CL	12	13	1.380	115	•	A++	7,0
11553 0058	553 0803ABX C CL	16	18	1.800	113	•	A++	7,0
11553 0059	553 1601ABX C CL	15	17	2.030	135	•	A++	7,1
11553 0060	553 1602ABX C CL	23	25	2.730	119	•	A++	7,1
11553 0063	553 0802ABX C LR	13		1.540	118	•	A++	7,0
11553 0064	553 0803ABX C LR	18		2.000	111	•	A++	7,0
11553 0065	553 1601ABX C LR	17		2.250	132	•	A++	7,1
11553 0066	553 1602ABX C LR	25		3.030	121	•	A++	7,1

symmetrical circular beam

11553 0069	553 0802R C	13		1.540	118		A++	7,0
11553 0070	553 0803R C	18		2.000	111		A++	7,0
11553 0071	553 1601R C	17		2.250	132		A++	7,1
11553 0072	553 1602R C	25		3.030	121		A++	7,1
11553 0075	553 0802R C CL	12	13	1.380	115	•	A++	7,0
11553 0076	553 0803R C CL	16	18	1.800	113	•	A++	7,0
11553 0077	553 1601R C CL	15	17	2.030	135	•	A++	7,1
11553 0078	553 1602R C CL	23	25	2.730	119	•	A++	7,1
11553 0081	553 0802R C LR	13		1.540	118	•	A++	7,0
11553 0082	553 0803R C LR	18		2.000	111	•	A++	7,0
11553 0083	553 1601R C LR	17		2.250	132	•	A++	7,1
11553 0084	553 1602R C LR	25		3.030	121	•	A++	7,1

* see notes

** 50% luminous flux at 44% power consumption

Also available with output reduction (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



Now more efficient and more powerful!

Pendant LED Luminaires

Series 564/565 ...

Application:

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, lifetime 100,000h. 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.

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)

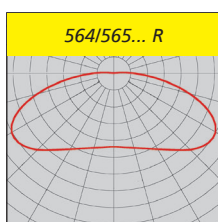
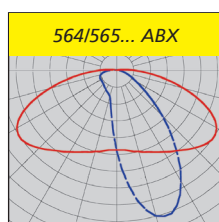
1-10V (DIMA)

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

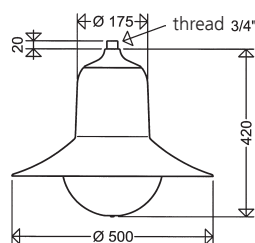
Also, combinations of the functions are possible (CL LR / CL LA).

Further Options:

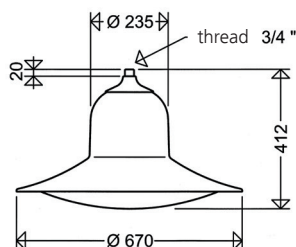
- 3,000 K, light-colour 730 (ca. 8% lower luminous flux)
- 1,800K, light colour 518 „Amber“ (ca. 34% lower luminous flux)
- protection class II (SKII)
- special painting in RAL- or DB- colours



Series 564



Series 565



Schuch Quality – your advantage:

- ECG with high surge voltage resistance, reliable due to overload, short circuit and overheating protection
- optimal light distribution due to highly efficient lens optics with direct beam
- excellent 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)
- eco-friendly, no light emission into the upper half-space. „Dark-Sky“ requirements are fulfilled
- future proof by using standardized LED-modules (Zhaga)

564/565...



Article no.	Type	Luminous flux [lm] *	Power/ consumption [W]	Luminous efficacy [lm/W]	Energy efficiency class	Weight [kg] (without padding material)
11564 0003	564 0803ABX	18	2.530	141	A++	3,9
11564 0004	564 0803R	18	2.530	141	A++	3,9
11564 0001	564 1603ABX	35	4.960	142	A++	3,9
11564 0002	564 1603R	35	4.960	142	A++	3,9



11565 0009	565 1603ABX	35	4.840	138	A++	5,6
11565 0005	565 1603R	35	4.840	138	A++	5,6
11565 0010	565 3203ABX	70	9.560	137	A++	5,7
11565 0006	565 3203R	70	9.560	137	A++	5,7



* see notes

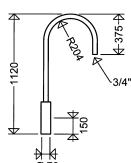
Notes:

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

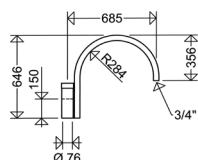
All technical data is relevant at the time of print. Actual technical data can be found in the internet under www.schuch.de.



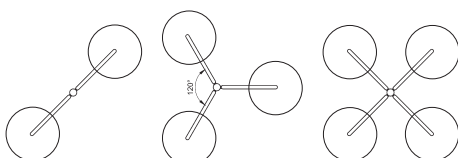
Round arch pole-top adapter



Article no.	Type	Description	Weight
61999 0001	619/1	for 1 fitting	8,8 kg



62299 0001	622/1	for 1 fitting	7,2 kg
62299 0002	622/2	for 2 fitting	11,8 kg
62299 0003	622/3	for 3 fittings	16,4 kg
62299 0004	622/4	for 4 fittings	21,1 kg

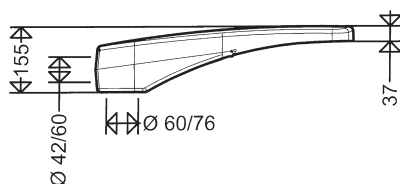
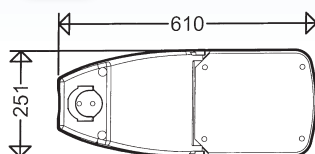


Subject to technical changes, misprints and errors.



Accessories / Spare Parts

Article no.	Type	
10064 9003	10064 P LED	PMMA-glass, clear-pearled for 564... LED
10065 9001	10065 P	PMMA-glass, clear-pearled for 565... LED
90113 0002	HA 08	visor to avoid backwards luminous flux for 564/565 08..
90113 0003	HA 16	visor to avoid backwards luminous flux for 564/565 16..
90113 0005	HA 32	visor to avoid backwards luminous flux for 564/565 32..



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.

Modern LED Plane Surface Floodlight with Multi-Purpose Mounting System Series 48... A

Application:

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, lifetime 100,000h. 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.

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)

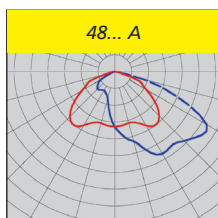
1-10V (DIMA)

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. 34% 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)
- Ready for Light Management Systems (RFL)
- Light Management System (LIMAS)
- bird deterrence (BD)
- special painting in RAL colours



Schuch Quality – your advantage:

- 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
- 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)

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



48001 0202	48 0801A	9	1.300	144	A++	7,5
48001 0203	48 0802A	13	1.780	137	A++	7,5
48001 0204	48 0803A	18	2.400	133	A++	7,5
48001 0205	48 1601A	17	2.510	148	A++	7,6
48001 0206	48 1602A	25	3.420	137	A++	7,6
48001 0207	48 1603A	35	4.620	132	A++	7,6
48001 0213	48 2401A	26	3.850	148	A++	7,6
48001 0214	48 2402A	37	5.230	141	A++	7,6
48001 0216	48 2403A	53	7.050	133	A++	7,6
48001 0208	48 3201A	34	5.040	148	A++	7,7
48001 0209	48 3202A	50	6.850	137	A++	7,7
48001 0210	48 3203A	70	9.240	132	A++	7,7

* 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

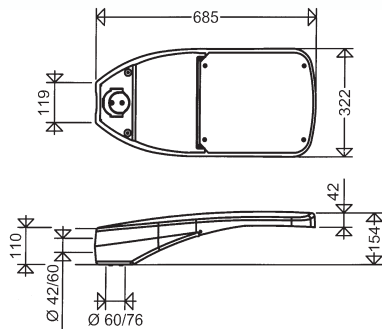
Pipe brackets for wall, pole and corner mounting, and post top brackets please see end of this chapter.

Article no.	Type	
48002 9000	48/010	flat safety glass

Modern LED Plane Surface Floodlight with Multi-Purpose Mounting System Series 47... A



DB standardized by Deutsche Bahn AG



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.

Application:

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.

Electro kit: Carrying all electrical components, mains connection terminal as isolating plug connection completely removable.

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, lifetime 100,000h. 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.

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)

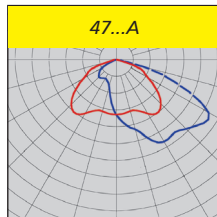
1-10V (DIMA)

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. 34% lower luminous flux)
- protection class I (SKI)
- for connection to group or central battery systems (ZB)
- seawater-resistant version (SWP)
- Ready for Light Management Systems (RFL)
- Light Management System (LIMAS)
- bird deterrence (BD)
- special painting in all RAL colours



Schuch Quality – your advantage:

- ECG with surge voltage resistance, reliable due to overload, short-circuit and excess temperature 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)



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 0103	47 3201A	34	5.240	154	A++	10,2
47000 0132	47 3202A	50	7.130	143	A++	10,2
47000 0104	47 3203A	70	9.610	137	A++	10,2
47000 0105	47 4801A	52	7.840	151	A++	10,2
47000 0131	47 4802A	75	10.650	142	A++	10,2
47000 0109	47 4803A	106	14.290	135	A++	10,2
47000 0107	47 6401A	69	10.430	151	A++	10,3
47000 0134	47 6402A	99	14.120	143	A++	10,3
47000 0110	47 6403A	140	18.860	135	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).



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	
47001 9002	47/010	flat safety glass

NEW

FOCO

LED Plane Surface Floodlight

with variable setting of the luminous flux

Series 7600... A VARIO

Application:

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, optic and electronic ballast.

Glass: Flat safety glass pane, resistant to temperature changes, impact resistant IK08, 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 mm².

Cable entry: 2 cable entries M20 x 1.5 (1 cable gland and 1 screw plug).

Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting, or for pole mounting in combination with pipe clamp ROB 60/76 (see accessories) respectively.

Electrical design:

LED module: Zhaga compliant, 4,000K, $R_a > 70$, lifetime $L_{90} > 100,000$ h

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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.

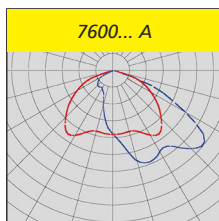
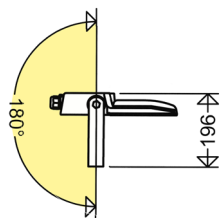
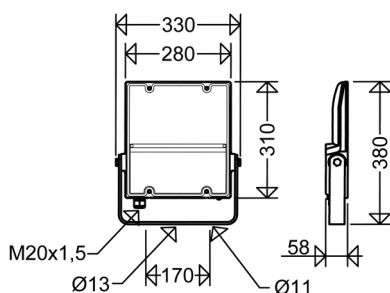
DALI interface (DIMD)

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. 34% less light output)
- Optic asymmetrical wide beam (AB)
- Optic asymmetrical extremely wide beam (ABX)
- optics for ME-classes (AB3)
- low glare optics (ABL)
- dimmable via DALI (DIMD)
- for connection to group or central battery systems (ZB)
- special painting in all RAL colours



Schuch Quality – your advantage:

- 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, short-circuit and over temperature 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.

Article No.	Type	Power consumption [W]*	Luminous flux [lm] ^{1) *}	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 2,430lm and 4,470lm (Version L50) or 4,930lm and 9,030lm (Version L100). Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

76000 0100	7600 L50A VARIO	17	2.430	143	A++	HME 80, HST 50	4,1
		18	2.590 ²⁾	144	A++	HME 125	
		22	3.010	137	A++	2 x HME 80, HST 70	
		35	4.470	128	A++	2 x HME 125	
76000 0101	7600 L100A VARIO	34	4.930	145	A++	2 x HME 125	4,2
		46	6.410	139	A++	HST 100	
		54	7.290 ²⁾	135	A++	HME 250	
		70	9.030	129	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).



Outdoor
Light Fittings

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 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



Now more efficient and more powerful!



FOCO L LED Plane Surface Floodlight Series 7700... A

Application:

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 optic-modules

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

Glass: Flat safety glass pane, resistant to temperature changes, impact resistant IK08, silicone gasket.

Light distribution: Narrow beam.

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

Cable entry: 2 cable entries M20 x 1.5 (1 cable gland and 1 screw plug).

Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting respectively for direct pole mounting in addition with pipe clamps **ROB 60/76** (see accessories).

Electrical design:

LED module: Zhaga compliant, 4,000K, $R_g > 70$, lifetime $L_{90} > 100,000h$

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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.

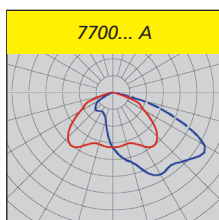
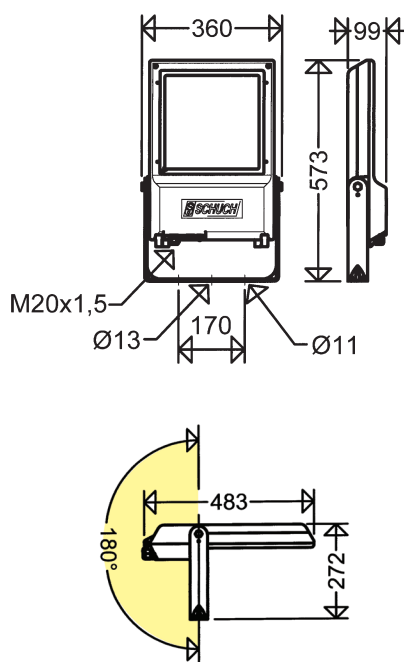
Reduced operation 50% between 22:00 and 4:00h CET or 23:00 and 5:00h CEST, also available with deviating times and with alternative dimming step.

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. 34% lower luminous flux)
- asymmetrical wide beam (AB-optics)
- asymmetrical extremely wide beam (ABX)
- optics for ME-classes (AB3)
- low glare optics (ABL)
- dimmable via DALI (DIMD)
- for connection to group or central battery systems (ZB)
- special painting in all RAL colours

Schuch Quality – your advantage:

- ECG with high 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 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.

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]	Constant luminous flux function (CL)	Light output reduction (LR)	Energy efficiency class	Weight [ca. kg] (without packaging)
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7700 ... A



77000 0002	7700 3203A	70		9.200	131			A++	9,2
77000 0003	7700 4803A	106		13.770	130			A++	9,6
77000 0004	7700 6403A	140		17.970	128			A++	9,6
77000 0018	7700 3203A CL	63	70	8.280	131	•		A++	9,2
77000 0019	7700 4803A CL	95	106	12.390	130	•		A++	9,6
77000 0020	7700 6403A CL	126	140	16.180	128	•		A++	9,6
77000 0022	7700 3203A LR	70		9.200	131		•	A++	9,2
77000 0023	7700 4803A LR	106		13.770	130		•	A++	9,6
77000 0024	7700 6403A LR	140		17.970	128		•	A++	9,6

* see notes

** 50% luminous flux at 44% power consumption

Also available with output reduction (LA) as well as combinations of these functions (CL LR / CL LA).



Outdoor
Light Fittings

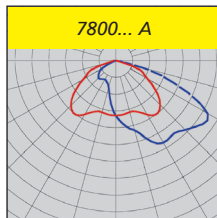
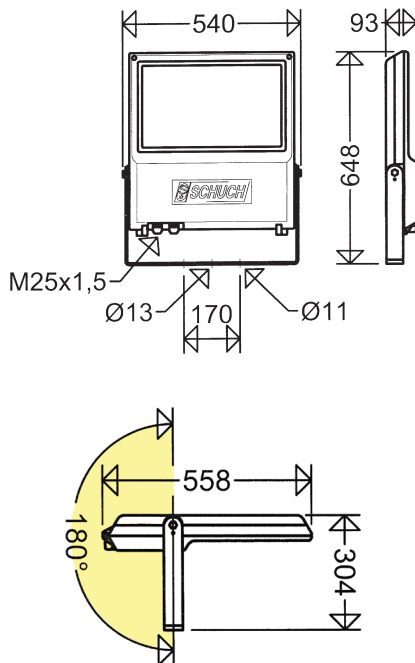
Accessories / Spare Parts

Article no.	Type	
78001 9002	7700/010	spare safety glass
90270 0005	ROB 60/76	pipe clamp for direct pole mounting or on multiple post top adapters
90120 9011	2530	plastic cable gland M20 x 1,5 black
90121 9088	2600	plastic plug M20 x 1,5 black

FOCO XL LED Plane Surface Floodlight Series 7800... A



Now more efficient and
more powerfull!



Application:

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 IK08, silicone gasket.

Light distribution: Narrow beam.

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

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, lifetime 100,000h. 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.

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. 34% lower luminous flux)
- asymmetrical wide beam (AB)
- asymmetrical extremely wide beam (ABX)
- optics for M-classes (AB3)
- low glare optics (ABL)
- for connection to group or central battery systems (ZB)
- special painting in all RAL colours

Schuch Quality – your advantage:

- 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
- 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.

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]	Constant luminous flux function (CL)	Light output reduction (LR)**	Energy efficiency class	Weight [ca. kg] (without packaging)
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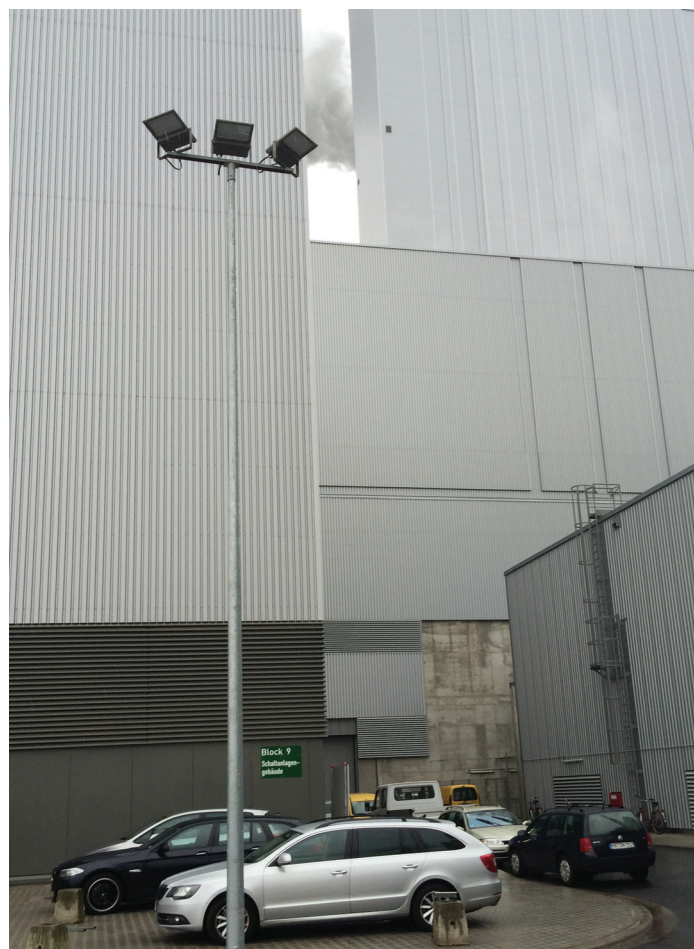
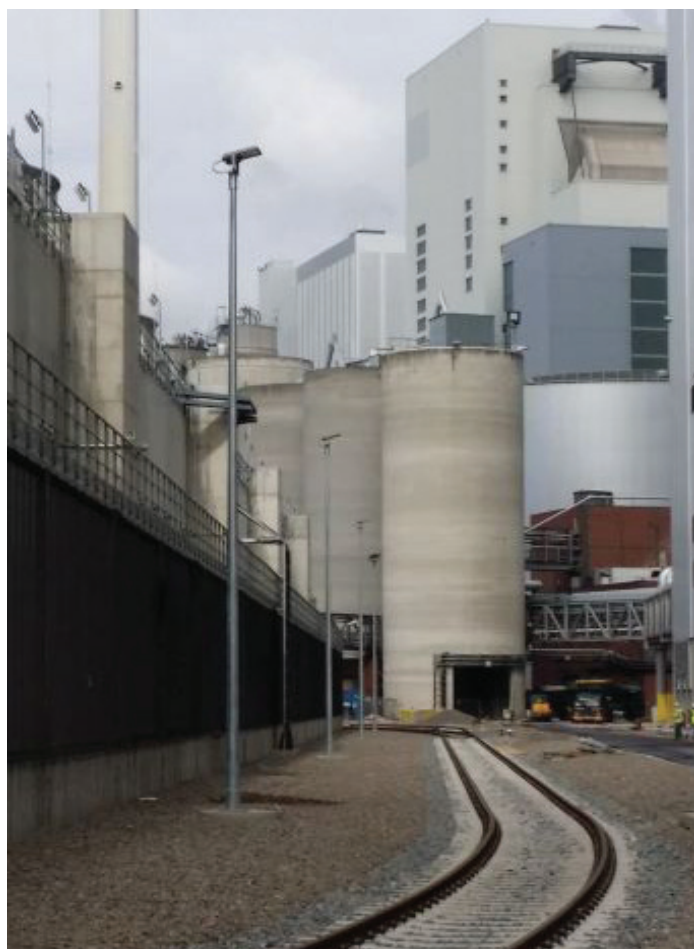
7800 ... A



78000 0021	7800 6403A	1	140		18.710	134		A++	15,9
78000 0022	7800 12803A	2	280		35.950	128		A++	17,0
78000 0024	7800 6403A CL	1	126	140	16.840	134	•	A++	15,9
78000 0025	7800 12803A CL	2	252	280	32.350	128	•	A++	17,0
78000 0062	7800 6403A LR	1	140		18.710	134	•	A++	15,9
78000 0063	7800 12803A LR	2	280		35.950	128	•	A++	17,0

* see notes ** 44% luminous flux at 50% power consumption

Also available with output reduction (LA) as well as combinations of these functions (CL LR / CL LA).



Outdoor
Light Fittings

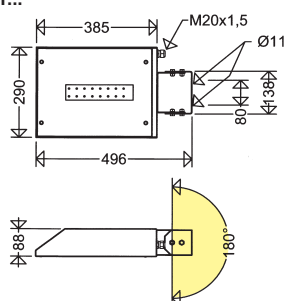
Accessories / Spare Parts

Article no.	Type	
78001 9001	7800/010	spare safety glas
90270 0005	ROB 60/76	pipe clamp for direct pole mounting or on multiple post top adapters
90117 9000	2537	plastic cable gland M25 x 1,5 black
90118 9000	2538	plastic plug M25 x 1,5 black



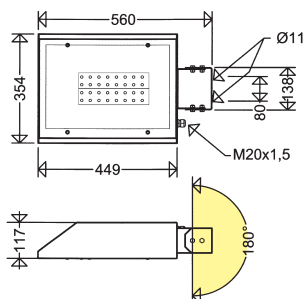
Pictures: Special paint colour DB 702N (mica-iron paint, grey)

7571...



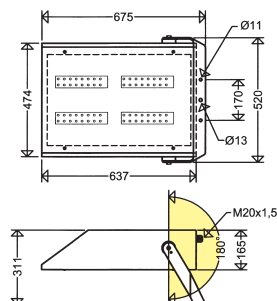
Swivel range 180°

7572...



Swivel range 180°

7573...



Swivel range 180°

LED Plane Surface Floodlight Series 7571/7572/7573... A

Application:

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 4mm² 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, lifetime 100,000h. 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.

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)

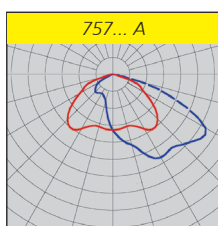
1-10V (DIMA)

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)
- 1,800K, light colour 518 „Amber“ (ca. 34% lower luminous flux)
- Optic asymmetrical wide beam (AB)
- Optic asymmetrical extremely wide beam (ABX)
- for connection to group or central battery systems (ZB)
- special painting in all RAL colours



Schuch Quality – your advantage

- ECG with high surge voltage resistance, reliable due to overload, short circuit and overheating protection, additional temperature monitoring of the LED module
- 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)

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.



Article No.	Type	Power consumption [W]	Power consumption/LR [W] (reduced)	Luminous flux [lm]	Light output [lm/W]	Constant luminous flux function (CL)	Light output reduction (LR)	Energy efficiency class	Weight [kg] (without packing material)
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7571 1603A



75711 0001	7571 1603A	35		4.690	134			A++	4,1
75711 0031	7571 1603A CL	32	35	4.220	132	•		A++	4,1
75711 0011	7571 1603A LR	35		4.690	134		•	A++	4,1
75711 0021	7571 1603A CL LR	32	35	4.220	132	•	•	A++	4,1

*see notes **44% Rated input power with 50% luminous flux



7572 3203A



75721 0004	7572 3203A	70		9.480	135			A++	5,7
75721 0034	7572 3203A CL	63	70	8.530	135	•		A++	5,7
75721 0014	7572 3203A LR	70		9.480	135		•	A++	5,7
75721 0024	7572 3203A CL LR	63	70	8.530	135	•	•	A++	5,7

*see notes **44% Rated input power with 50% luminous flux



7573 6403A



75733 0033	7573 6403A	140		18.800	134			A++	9,5
75733 0036	7573 6403A CL	126	140	16.920	134	•		A++	9,5
75733 0034	7573 6403A LR	140		18.800	134		•	A++	9,5
75733 0035	7573 6403A CL LR	126	140	16.920	134	•	•	A++	9,5

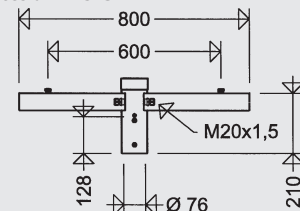
*see notes **44% Rated input power with 50% luminous flux



Post top 7571/1 M



Pole cross arm 7573 TR



Accessories / Spare Parts

Article no.	Type	
75001 9016	7511 LED	spare glass pane 7571... LED
75001 9008	7502 LED	spare glass pane 7572... LED
75001 9009	7501 LED	spare glass pane 7573... LED
25610 9000	2561	plastic cable gland M20 x 1,5
75739 9003	7571/1 M	pole top with accessories for single mounting on pole Ø 76mm
75739 9004	7571/2 M	pole top with accessories for double mounting on pole Ø 76mm
75739 0002	7573 TR	pole cross arm with accessories for mounting 2 plane surface floodlights to poles of Ø 76mm
90270 0005	ROB 60/76	pipe clamp for direct pole mounting or on multiple post top adapters

NEW

FOCO

LED Floodlight

with variable setting of the luminous flux

Series 7600... VARIO



Application:

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 IK08, 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 mm².

Cable entry: 2 cable entries M20 x 1.5 (1 cable gland and 1 screw plug).

Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting, or for pole mounting in combination with pipe clamp ROB 60/76 (see accessories) respectively.

Electrical design:

LED module: Zhaga compliant, 4,000K, $R_g > 70$, lifetime $L_{90} > 100,000$ h

ECG: 220-240V, 50-60Hz, lifetime 100,000h. 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.

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.

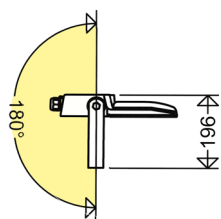
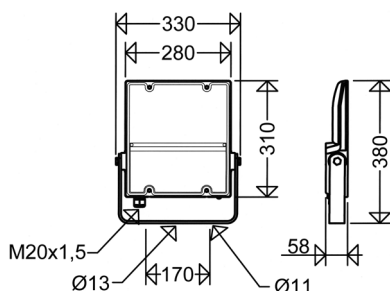
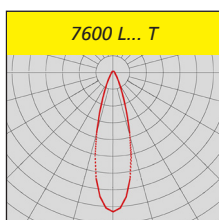
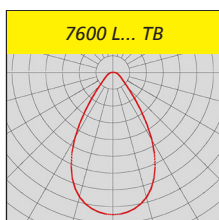
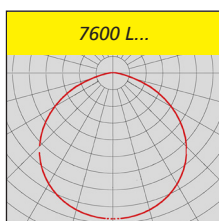
DALI interface (DIMD)

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. 34% less light output)
- Optics (TX) for extremely narrow beam
- dimmable via DALI (DIMD)
- for connection to group or central battery systems (ZB)
- special painting in all RAL 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.

Schuch Quality – your advantage:

- 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, short-circuit and over temperature 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)
- 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	narrow-wide beam	narrow-beam	Energy efficiency class	Weight [kg] (without packing material)	Power consumption [W]*	Luminous flux [lm] ¹⁾ *	Luminous efficacy [lm/W]	Substitute for ca. **
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7600 ... VARIO



The luminous flux is variably adjustable to values between 2,500lm and 4,600lm (Version L50) or 5,060lm and 9,270lm (Version L100). Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

76000 0102	7600 L50 VARIO			A++	3,8	17	2.500	147	HME 80, HST 50
76000 0104	7600 L50TB VARIO	•		A++	3,8	18	2.660 ²⁾	148	HME 125
76000 0106	7600 L50T VARIO	•		A++	3,8	22	3.100	141	2 x HME 80, HST 70
						35	4.600	131	2 x HME 125

76000 0103	7600 L100 VARIO			A++	3,9	34	5.060	149	2 x HME 125
76000 0105	7600 L100TB VARIO	•		A++	3,9	46	6.580	143	HST 100
76000 0107	7600 L100T VARIO	•		A++	3,9	54	7.480 ²⁾	139	HME 250
						70	9.270	132	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.

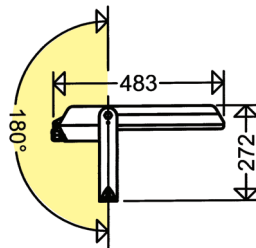
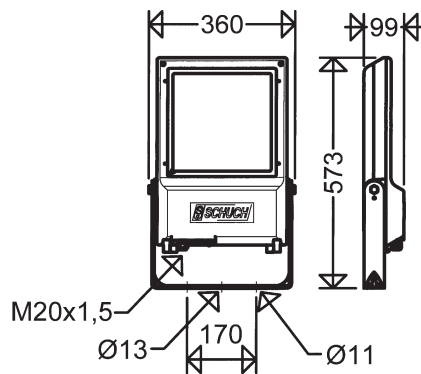
Also available with output reduction (LR / LA) or constant luminous flux function (CL) as well as combinations of these functions (CL LR / CL LA).

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 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



Now more efficient and more powerful!



FOCO L LED Floodlight Series 7700...

Application:

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 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, silicone gasket.

Light distribution: Narrow-wide (TB) or narrow beam (T).

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

Cable entry: 2 cable entries M20 x 1.5 (1 cable gland and 1 screw plug).

Mounting: Mounting bracket, swivel range 180°, with 3 drillings for wall- or ceiling mounting 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, lifetime 100,000h. 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.

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)

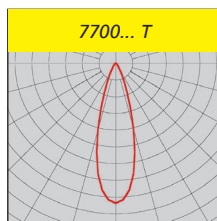
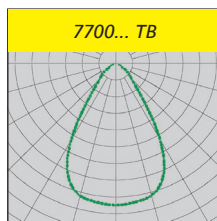
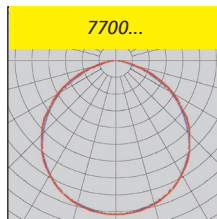
1-10V (DIMA)

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. 34% lower luminous flux)
- light output reduction (LR) per 230V control line (standard 50%, dimmable)
- dimmable version via DALI (DIMD)
- extremely narrow beam (TX)
- for connection to group or central battery systems (ZB)
- special painting in all RAL colours



Schuch Quality – your advantage:

- 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
- 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.

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 ...



77000 0006	7700 3203			A++	9,2	70	9.630	138
77000 0010	7700 3203TB	•		A++	9,2			
77000 0014	7700 3203T		•	A++	9,2			
77000 0007	7700 4803			A++	9,6	106	14.410	136
77000 0011	7700 4803TB	•		A++	9,6			
77000 0015	7700 4803T		•	A++	9,6			
77000 0008	7700 6403			A++	9,6	140	19.030	136
77000 0012	7700 6403TB	•		A++	9,6			
77000 0016	7700 6403T		•	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)



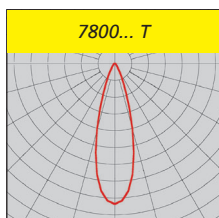
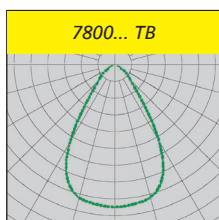
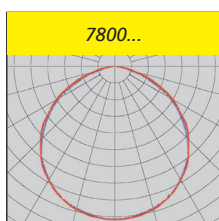
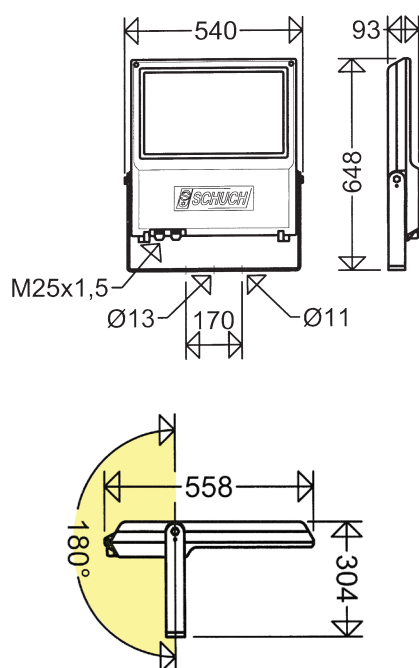
Outdoor
Light Fittings

Accessories / Spare Parts

Article no.	Type	
78001 9002	7700/010	spare safety glas
90270 0005	ROB 60/76	pipe clamp for direct pole mounting or on multiple post top adapters
90120 9011	2530	plastic cable gland M20 x 1,5 black
90121 9008	2600	plastic plug M20 x 1,5 black



Now more efficient and more powerful!



FOCO XL Plane Surface Floodlight Series 7800...

Application:

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 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 IK08, silicone gasket.

Light distribution: Narrow-wide (TB) or narrow beam (T).

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

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, lifetime 100,000h. 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.

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. 34% lower luminous flux)

– **light output reduction (LR)** per 230V control line (standard 50%, dimmable)

– dimmable version via DALI (DIMD) or

1-10V interface (DIMA)

– uniform luminous flux option (CL) to keep the light output on same level for the whole lifetime

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

– special painting in all RAL colours

Schuch Quality – your advantage:

- 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
- 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.

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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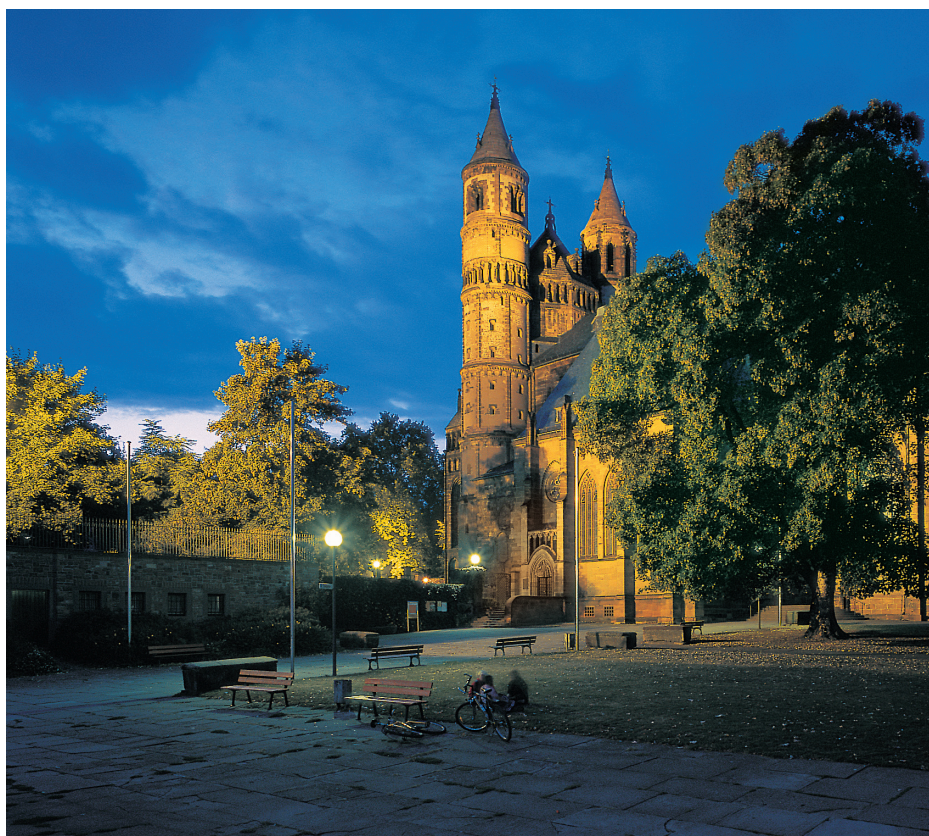
7800 ...



78000 0011	7800 6403			A++	15,9	140	19.560	140
78000 0001	7800 6403TB	•		A++	15,9			
78000 0041	7800 6403T		•	A++	15,9			
78000 0012	7800 12803			A++	17,0	280	37.620	134
78000 0002	7800 12803TB	•		A++	17,0			
78000 0042	7800 12803T		•	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)



Outdoor
Light Fittings

Accessories / Spare Parts

Article no.	Type	
78001 9001	7800/010	spare safety glass
90270 0005	ROB 60/76	pipe clamp for direct pole mounting or on multiple post top adapters
90117 9000	2537	plastic cable gland M25 x 1,5 black
90118 9000	2538	plastic plug M25 x 1,5 black

LED Floodlight

Series 7900...

Application:

Industrial areas, large equipment for open-cast mining, installation sites, stockyards, crane systems, on- and off-shore areas. Illumination of buildings, for indoor installation with high ceilings .e.g. industrial halls, waste bunkers etc.

Design:

Housing: Copper-free cast aluminium.

ECG located inside the housing.

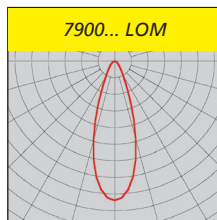
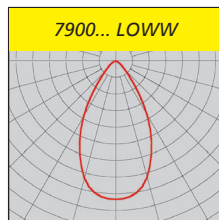
Flat safety glass: Resistant to temperature variations, frameless, impact resistance

IK08, silicone gasket.

Light distribution: Narrow (LOM) or narrow/wide (LOWW) beam.

Connection: Terminal compartment accessible from outside with 2 entries, 1 gland and 1 blind plug made from plastic M25 x 1.5mm².

Mounting: Bracket, infinitely swivelling around the longitudinal axis of the floodlight (tilt angle adjustment).



Technical Data:

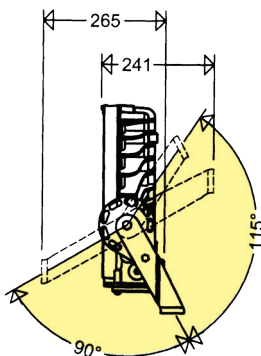
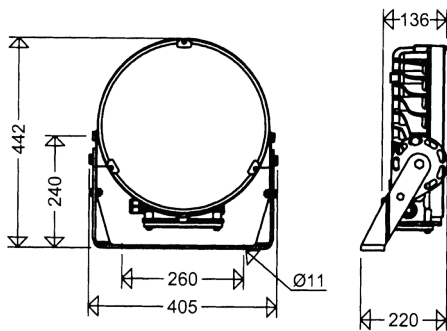
LED: Highpower-LED, typically 5,000K, colour rendering CRI > 70, lifetime (L80 100,000h

ECG: 220-240V AC, 50/60Hz. Due to the inrush current of the electronic ballasts, the maximum permissible number of light fittings per circuit breaker is limited. Surge voltage resistance 4kV, excess temperature protection, overload and short circuit protection.

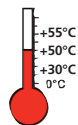
Ambient temperature: -20°C up to see article tables
(-50°C - versions on demand).

Options:

- 2nd cable gland for cable looping
- „D“-sign for locations with increased fire risk (D)
- for connection to group or central battery systems (ZB)



Swivel range: ± 205



Schuch Quality - your advantage:

- extremely low luminous flux decline during lifetime $L_{80} > 100.000h$
- ECG with high over voltage protection, reliable due to overload -, short-circuit - and temperature excess protection
- excellent thermal management possible by direct adaption of the LED to the die-cast aluminium housing, large cooling surface, excellent thermal conductivity
- sturdy housing made from copper free aluminium alloy
- infinitely adjustable tilt angle
- calculated lens optics assure a homogeneous and effective light distribution, illumination due to the Multi-Layer technology
- applicable in a wide temperature range
- instant light with maximum luminous flux even at very low temperatures (increased luminous flux)

7900 ...



Article no.	Type	Power consumption W *	Luminous flux [lm] *	Luminous efficacy [lm/W]	Tmax [°C]	Energy efficiency class	Weight [ca. kg] (without packaging)
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narrow beam

79000 0001	7900 4201LOM	48	4.710	98	55	A++	11,8
79000 0002	7900 4203LOM	90	8.260	92	40	A+	11,8

narrow wide beam

79000 0004	7900 4201LOWW	48	4.650	97	55	A++	11,8
79000 0005	7900 4203LOWW	90	8.150	91	40	A+	11,8

* see notes

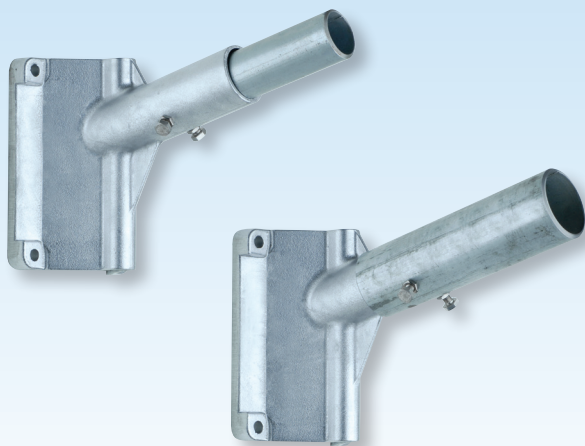
Notes:

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.

Accessories / Spare Parts

Article no.	Type	
79001 9001	7901	spare safety glas
75350 0031	SD 7900	vibration absorbing suspension device



Cast Aluminium Multi-Purpose Pole Arm Carrier Series 4860 – 4864

Application: Series 42, 43, 46, 47, 48, 287

Application:

For mounting outdoor light fittings on flat walls and corners of buildings.

Design:

Aluminium casting: Natural finish, with four fixing holes $\varnothing 10,5\text{mm}$, and carrier shaft for galvanized steel pole arms.

Pole arm: $\varnothing 42\text{mm}$ (100, 250, or 400mm long), or $\varnothing 60\text{mm}$ (100 or 250mm long), with 2 fixing screws M8

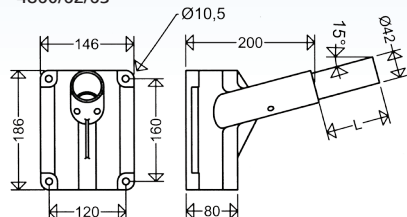
Pole arm assembly:

The $\varnothing 42\text{mm}$ pole arm is pushed into the carrier shaft, the $\varnothing 60\text{mm}$ 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

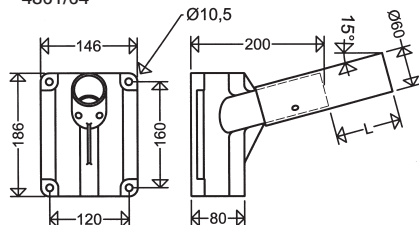
4860/62/63



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

4861/64



Welded Aluminium Standard Pole Arm Carrier Series 4870 / 4871

Application: Series 42, 43, 46, 47, 48

Application:

For mounting outdoor light fittings on flat walls and corners of buildings.

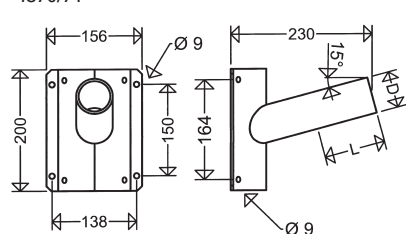
Design:

Aluminium plate 4 mm thick, powder coated (RAL 7035), with eight fixing holes $\varnothing 9\text{mm}$ and pole arm $\varnothing 42\text{mm}$ (100mm long) or $\varnothing 60\text{mm}$ (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 0002	4871	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 stainless steel, glass pearl treated. 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	600/1	for 1 fitting	3,2	42, 43, 44, 46, 47, 48, 287 (20W)
60099 0002	600/2	for 2 fittings	4,0	
60099 0003	600/3	for 3 fittings	4,8	
60099 0004	600/4	for 4 fittings	5,6	

Pole-top brackets Ø 60mm

60199 0001	601/1	for 1 fitting	3,7	42, 44, 46, 47, 48 and 7573 with ROB 60/76
60199 0002	601/2	for 2 fittings	5,1	
60199 0003	601/3	for 3 fittings	6,5	
60199 0004	601/4	for 4 fittings	7,9	

Pole-top brackets Ø 60mm

61099 0001	610/1	for 1 fitting	3,7	44 A, and 7573 with ROB 60/76
61099 0002	610/2	for 2 fittings	5,1	
61099 0003	610/3	for 3 fittings	6,5	
61099 0004	610/4	for 4 fittings	7,9	

Reducers

60399 0001	603 (60/42)	1	2,4	42,43,47,48,46
60499 0001	604 (60/42)	2	4,0	287 12L...
60599 0001	605 (60/42)	3	3,5	287 06L...
60699 0001	606 (48/42)	4	2,8	42,43,47,48,46
60799 0001	607 (60/42)	5	1,6	42,43,47,48,46

Round arch pole-top adapter

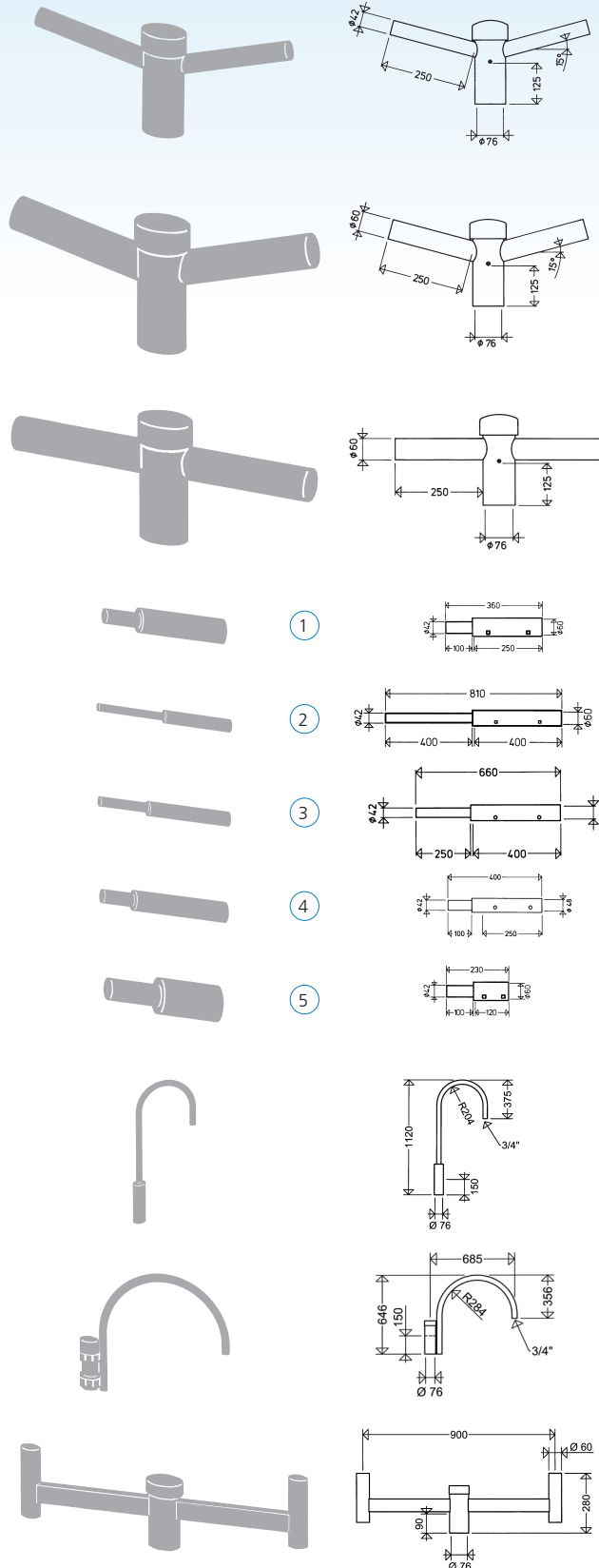
61999 0001	619/1		8,8	564, 565
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Pole-top

62299 0001	622/1	for 1 fitting	7,2	564, 565
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Pole-top

62599 0001	625/1	for 1 fitting	4,6	541, 542, 543, 553, 556, 557, 544, (with RZ 1), 43, 53, 44, 46, 47, 48
62599 0002	625/2	for 2 fittings	7,0	





*Light on Demand
by intelligent light control*



When is the right time to implement a lighting management system? Right at the refurbishment of the old lighting? Or should you rather wait a few years? Perhaps financial resources are not available at the time of the refurbishment, or you might want to start with a small test installation, to gain experience.

There is no unique answer to this question. But one thing is for sure: Once the standard lights have been installed, a simple backfitting or conversion to a light management system is no longer possible.

The „great freedom“

At this point the concept of „Ready for Light Management“ (RFL) comes in. RFL light fittings are prepared for the later use of a light management system. One or more Zhaga compliant sockets which are integrated in the luminaire housing allow the subsequent and tool-free installation of the required components such as controllers, antenna and sensors.

Because of the standardized sockets according to Zhaga book 18 it's your free choice to select a light management system, without any manufacturer bond.

Only condition:

The components must have a Zhaga compliant socket connector. That's why the use of RFL light fittings is so attractive.

Advantages

- potential, subsequent use of light-management-systems without additional reconstruction work
- standardized ZHAGA-conform sockets allow free choice of light-management-systems
- tool-less quick and easy assembling of the light management system components
- simply remove the socket cover, screw on the system component, READY!

LED-Outdoor Light Fitting - RFL - Version

prepared for backfitting with light management components

street light fittings 47, 48, 49, CUPINA (556), PLANE0 (557), 541, 543, 553*

plane surface floodlights 47A, 48A*

* Further series on demand.

Types / Versions:

- RFL O: With ZHAGA-socket at the upside of the housing for subsequent retrofit of a controller e.g. SLC-HUB (see also LIMAS-components).
- RFL OU: With an additional ZHAGA-socket at the underpart of the housing for subsequent retrofit of sensors for illumination according to need "Light on Demand", e.g. IR (see also LIMAS components)

Further types on demand.

To control the light fittings after retrofitted the corresponding light-management-system-software as well as potential further components are necessary (see also LIMAS components).

LIMAS - Components

Type	
SLC-HUB	fixture with light management system components LMS-controller, antenna, photocell
IR	fixture with infrared sensor depends on lighting - „Light on Demand“
USB-Dongle+Software und Lizenz	or the subsequent adjustment of factory programming and for the light-control in the field, including energy consumption display
Gateway	for the remote monitoring and control of light fittings with SIM card and mobile network, including data logger function



Foto: Andrea Badrutti, Chur

Outdoor
Light Fittings



LIMAS - Light Management System

Light on demand

Light only where it is needed and only as long as it is required – all while optimally exploiting the efficiency potential of LED technology and making maximum savings on energy costs.

With the LIMAS light management system from SCHUCH, you can create a needs-oriented, intelligent lighting control system for streets, squares and cycle paths.

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. What is more, programmed operating modes can be altered at any time, and lighting operating data read through encrypted remote access at a PC or via a tablet and USB dongle on site.

So your lighting network can be efficiently monitored, controlled, measured and operated at all times.

When does it make sense to use LIMAS?

1. General energy cost savings using light on demand.
2. With changing usage profiles, e.g. to accommodate temporary city-centre events (public events like markets, festivals etc.), when you want the lighting level to only drop later or not at all.
3. With different requirement profiles in different city areas (e. g. residential areas, industrial zones, the old town area, and conflict zones or social flashpoints).

Benefits

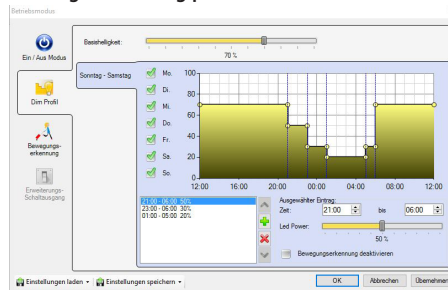
- (G)+(D) - optimised energy saving through light on demand
- (G)+(D) - easy cost control through energy consumption metering
- (G) - evaluation and export of selected/stored lighting data from the data base
- (G) - proactive, targeted maintenance and failure elimination through the light fittings' automatic 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) - security 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

1. Freely configurable dimming profiles based on time of day, duration and dimming level
2. Real-time access to the light fittings for Instant On or to alter dimming profiles as required
3. Integrated constant luminous flux function to keep the luminous flux constant over the LEDs' entire useful life
4. Energy consumption metering
5. Optional: motion detection with a motion sensor (light on demand)
6. Optional: optimised On/Off with brightness sensor
7. Optional: time, date, parameter and position monitoring via GPS receiver and GPS-enabled control unit, together with automatic error messages with location information

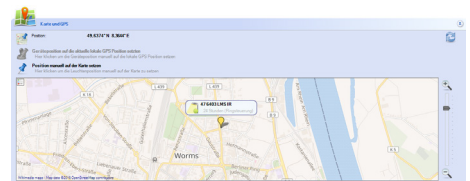
Setting of dimming profiles



Energy consumption indicator



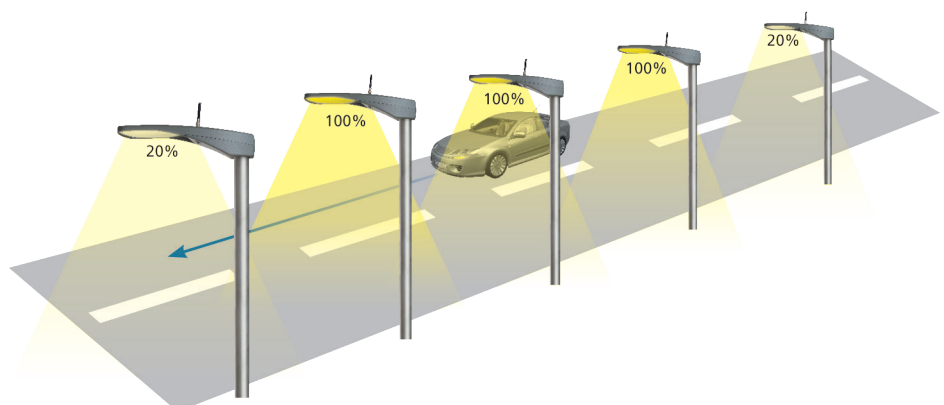
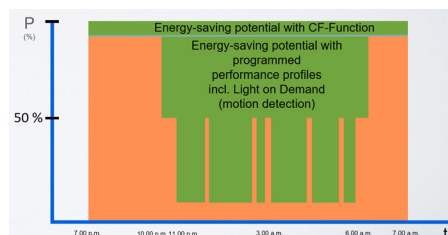
Location indicator



„Light on Demand“

When a road user passes along the street, this is recognised by the motion sensors integrated in the light fittings, and the dimmed lights automatically adjust up to the programmed lighting level. The signal is transmitted wirelessly from light fitting to light fitting, and all the fittings increase

their lighting level. The result is that the light accompanies the road user dynamically. After the programmed hold period the light fittings automatically return to the pre-set dimming level.



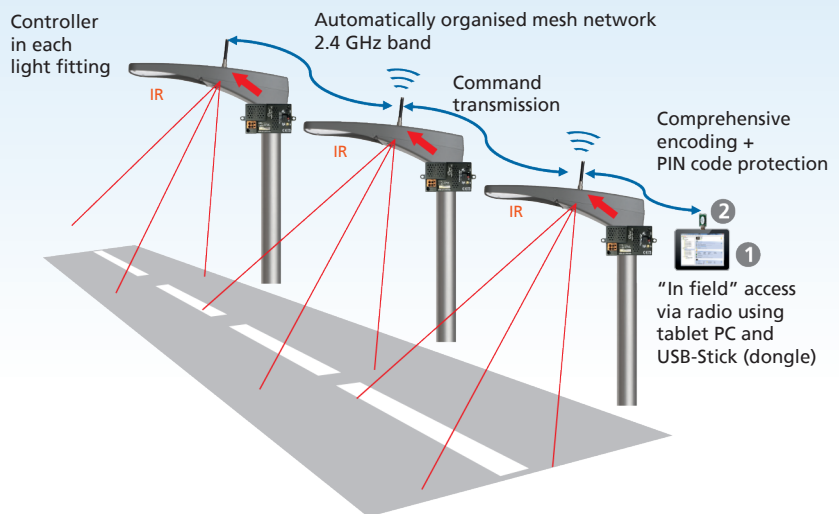


System versions

With USB dongle and software

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

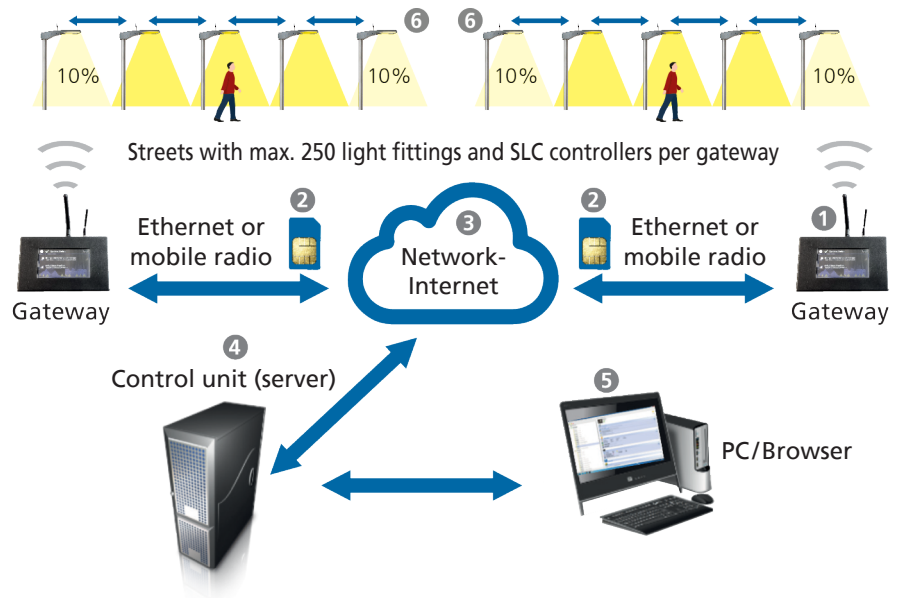
Up to 250 light fittings can be controlled by each USB dongle.



With gateway

The gateways **1**, are installed in switch cabinets within radio range of the light fittings and communicate via mobile radio **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 lights can be monitored, checked and controlled.



With a gateway, several networks can be linked and controlled. Consequently, there is theoretically no limit to the range and number of light fittings. Up to 250 light fittings can be controlled per gateway.

LED-Outdoor Light Fittings with Light Management System

Street light fittings 47, 48, 541, CUPINA (556), PLANEO (557)*

Rope supported light fittings 49, 59*

Plane Surface floodlights 47A, 48A, 7800A*

* Further series on demand.

Design:

- IR with infrared sensor for demand-based lighting - „Light on Demand“
- LMG with GPS antenna used for precisely timed dimming in connection with autonomous operation without gateway

Options:

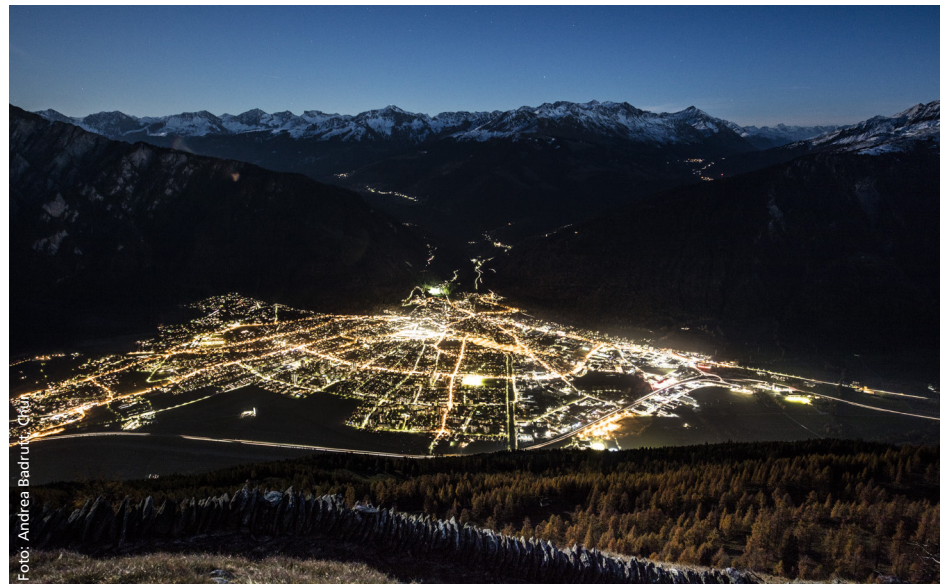
- factory programming of performance profiles according to customer requirements (timed dimming)
- > if the installation does not include a gateway, at least one light fitting must be of type LMG.
- factory programming of a constant light function (CF) according to customer requirements
- 3,000K (light colour 730)
- special painting in RAL colours

Spare Parts:

SB LMP sensor box with photocell / twilight switch

LIMAS - Components

Type	
USB-Dongle+Software und Lizenz	for subsequent adjustments of factory programmed settings and for controlling the light fittings in the field, including an energy consumption indicator
Gateway	for monitoring and controlling the light fittings from a distance with SIM card and mobile network incl. data logger function



Outdoor
Light Fittings



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.

A BROAD PRODUCT SPECTRUM, 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.



Product	Series	Page
Light Fittings with diffuser		
Series 161/162...	161/162.. MA	150
• for central battery systems	... 161.. ZB	151
• for high ambient temperatures up to +50°C	... H50 MA	152
Series 163... Generation 2	163 G2.. MA	153
for central battery systems	163... ZB	154
Series 164 KL...	164 KL... MA	155
small polyester light fittings		
for central battery systems	164 KL... ZB	156
Series 131...	131... MA	157
small PC-light fittings		
for central battery systems	131... ZB	158
Series 3611...	3611... MA	159
small die-cast aluminium light fittings		
for central battery systems	3611... ZB	160

Group or central battery systems

We recommend the use of systems of the make of INOTEC. Other makes upon request

Note

Emergency light fittings for zone 1/2 or 21/22 areas you may find in chapter „SCHUCH Explosion-Protected LED Light Fittings“
Emergency light fittings for other applications on demand.

LED-TECHNOLOGY

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.

2013

New emergency LED light fitting Series 161... can replace standard fluorescent tube versions up to 2 x 58 W.

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.

2016/17

Generation 2 of series 163 with a remarkable efficiency increase.



Foto: BASF



Dustproof/Waterproof LED Emergency Light Fitting with Diffuser Series 161 ..

Application:

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:

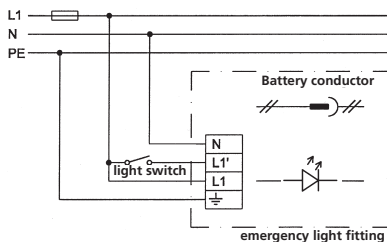
- 6.500K
- for higher ambient temperatures
- according to „International Featured Standard Food“ (IFS)
- for application in food industrie (LM)
- PC-diffuser frosted (PC)
- stainless steel clips (KE)
- dimmable, DALI-interface (DIMD)
- Through-wiring
- 4-conductor: L1, L1', N, PE or
- 6-conductor: L1, L1', L2', L3', N, PE

For versions with central battery sytem:

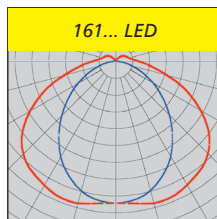
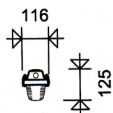
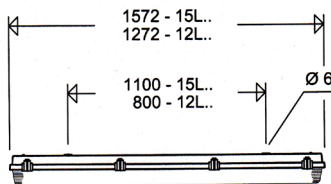
- with reduced luminous flux in DC-Mode (e. g.: 15%, 50% etc.)
- with separate module for monitoring individual light fittings

For versions with self-contained battery:

- With DALI-Emergency-Electronic Device for centralized Control and Monitoring (MA-Z)



Installation: connect battery conductor
Decommission: disconnect battery conductor



SCHUCH quality - your advantage:

- 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.

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	2.380	890	140	•		A++	1 x 36W	3,1
16118 0332	161 15L34/1 MA	23	3.470	940	151	•		A++	1 x 58W	3,8
16118 0333	161 12L42/1 MA	29	4.150	890	143	•		A++	2 x 36W	3,1
16118 0334	161 15L60/1 MA	41	6.120	940	149	•		A++	2 x 58W	3,8
16118 0341	161 12L22/3 MA	18	2.380	890	132	•	•	A++	1 x 36W	3,5
16118 0342	161 15L34/3 MA	24	3.470	940	145	•	•	A++	1 x 58W	4,2
16118 0343	161 12L42/3 MA	30	4.150	890	138	•	•	A++	2 x 36W	3,5
16118 0344	161 15L60/3 MA	42	6.120	940	146	•	•	A++	2 x 58W	4,2

161 .. ZB



for central battery systems

Application:

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.

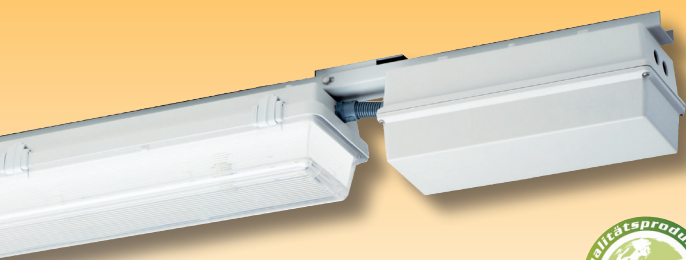
Connection voltage: 220-240V, 50/60Hz and 220V DC

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	38	6.030	6.030	159			A++	2 x 58W	2,6
16118 0063	161 15L75 ZB	47	7.640	7.640	163			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 161/162 .. H50

Application:

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:

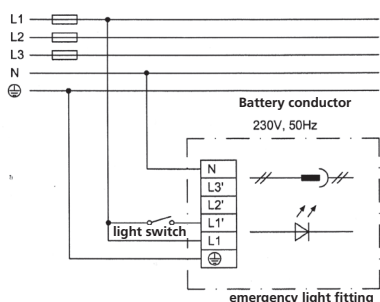
maintained operation = switching over to battery operation in case of mains failure, linear modules will be operated with reduced luminous flux as emergency lighting.

Connection voltage: 220-240V, 50/60Hz

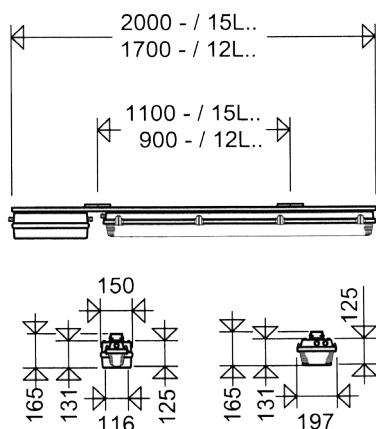
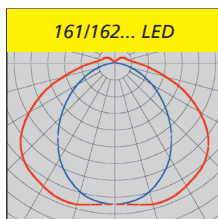
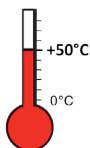
Ambient temperature: 0°C up to +50°C (maintained operation)

Options:

- 6.500K
- according to „International Featured Standard Food“ (IFS)
- for application in food industrie (LM)
- PC-diffuser frosted (PC)
- with DALI-Emergency-Electronic Device for centralized Control and Monitoring (MA-Z)



Installation: connect battery conductor
Decommission: disconnect battery conductor



Schuch Quality – your advantage:

- 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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161/162 ..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
16222 0001	162 12L42/1 H50 MA	28	4440	890	159	•		A++	2 x 36W	8,6
16222 0002	162 15L60/1 H50 MA	41	6590	940	161	•		A++	2 x 58W	9,6
16121 0003	161 12L22/3 H50 MA	18	2390	890	133	•	•	A++	1 x 36W	7,4
16121 0004	161 15L34/3 H50 MA	24	3440	940	143	•	•	A++	1 x 58W	8,2
16222 0003	162 12L42/3 H50 MA	29	4440	890	153	•	•	A++	2 x 36W	9,0
16222 0004	162 15L60/3 H50 MA	42	6590	940	157	•	•	A++	2 x 58W	10,0

* 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.. 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.

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

Application:

In humid, wet and dusty locations for illuminating escape routes.

Mechanical Design:

Housing: Glass fibre reinforced polyester resin, silicone 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:

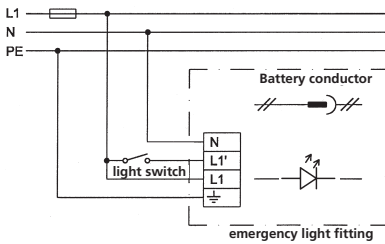
- 6.500 K
- according to „International Featured Standard Food“ (IFS)
- PC-diffuser stippled clear (PC)
- stainless steel clips (KE)
- dimmable, DALI-interface (DIMD)
- through-wiring
- 4-conductor: L1, L1', N, PE or
- 6-conductor: L1, L1', L2', L3', N, PE

For versions with central battery system:

- with with reduced luminous flux in DC mode (e. g: 15%, 50% etc.)
- with separate module for monitoring individual light fittings

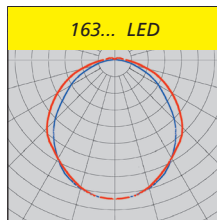
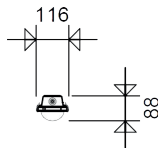
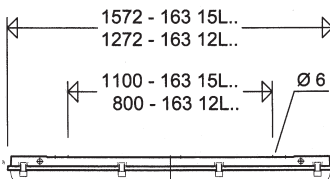
For versions with self-contained battery:

- With DALI-Emergency-Electronic Device for centralized Control and Monitoring (MA-Z)



Installation: connect battery conductor

Decommission: disconnect battery conductor



Advantages of the LED version:

- 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.

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	163 12L22G2/1 MA	17	2.270	810	134	•		A++	1 x 36W	2,6
16307 0032	163 15L34G2/1 MA	23	3.260	870	142	•		A++	1 x 58W	3,0
16307 0033	163 12L42G2/1 MA	29	4.030	810	139	•		A++	2 x 36W	2,6
16307 0034	163 15L60G2/1 MA	41	5.850	870	143	•		A++	2 x 58W	3,0
16307 0035	163 15L34G2/3 MA	24	3.260	830	136	•		A++	1 x 58W	3,4
16307 0036	163 15L60G2/3 MA	42	5.850	830	139	•		A++	2 x 58W	3,4

163 ..G2 ZB



for central battery systems

Application:

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	163 12L22G2 ZB	15	2.320	2.320	155			A++	1 x 36W	2,2
16307 0122	163 15L34G2 ZB	21	3.330	3.330	159			A++	1 x 58W	2,8
16307 0123	163 12L42G2 ZB	27	4.110	4.110	152			A++	2 x 36W	2,2
16307 0124	163 15L60G2 ZB	39	5.970	5.970	153			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.



Compact LED Emergency/Escape Sign Light Fitting Series 164KL ...

Application:

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 ... 201 opalescent white (W).

(Pictograms – if required – to be orde-

red separately, see accessories).

Clips: Single-piece plastic clips (KK).

Reflector: Painted aluminium, can be suspended or removed and carries the electrical component.

Connection terminal: 3 or 4 poles.

Cable entries: Variable, on the short sides and on the top, 2 plugs M20.

Mounting: 2 mounting points, rubber gasket and washers included.

Technical Data:

LED: High power LED, white, 6.500K, $R_a > 70$ (versions ...201) or line modul 4.000K, $R_a > 80$ (versions ...L...), life expectancy $L_{80} > 50.000$ h, at max. ambient temperature (see notes)

Battery: NiMH (versions ...201) 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 to 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.

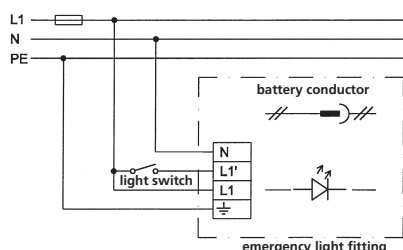
Version ...L08/... will operate at a reduced luminous flux.

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

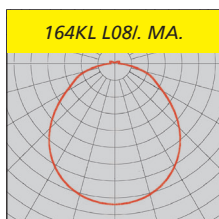
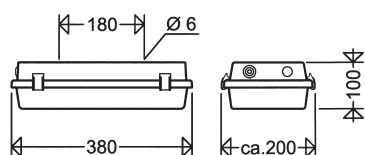
Wiring diagram maintained/stand by operation



Installation: connect battery conductor

Decommission: disconnect battery conductor

Stand-by operation: do not connect L1'



Options:

- stainless steel clips (KE)
- Cable entries to M25x1.5

For series with self-contained battery:

- with DALI-Emergency-Electronic Device for centralized Control and 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.

SCHUCH Quality - your advantage:

- 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 (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)

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 packingmaterial)
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164KL .../. MA



with self-contained battery and automatic self-monitoring

16408 0001	164KL 201/1 W MA	5,0	180	180	36	•	•		A++	---	1,1
16408 0002	164KL 201/3 W MA	5,0	180	180	36	•		•	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.

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

16408 0003	164KL 201 W ZB	4,0	180	180	45	•			A++	---	0,9
16408 0031	164KL L05G2 ZB	4,5	490	490	109				A++	1 x 8W	1,0
16408 0032	164KL L08G2 ZB	8,5	840	840	99				A++	1 x 11W	1,0
16408 0033	164KL L11G2 ZB	10,0	1.150	1.150	115				A++	1 x 18W	1,0
16408 0034	164KL L15G2 ZB	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.



Series 164KL... W with pictogram

Self-adhesive pictogram green/transparent¹⁾



121/32



121/33



121/34



121/35



121/36



121/37



121/38



121/39

for light fittings with white opalescent glass
windows for escape route signs acc. to DIN EN ISO
7010 und ASR A1.3.

Viewing distance = 30 m.

Accessories / Spare Parts

Article no.	Type	
Spare glasses		
16413 9001	164000 W	PMMA white opalescent for 164KL... W
16413 9007	164000 F G2	PMMA frosted for 164KL L.. G2
Brackets		
90232 0004	DA	ceiling bracket
Self-adhesive pictograms		
12112 0025	121/32	emergency EXIT „up“
12112 0026	121/33	emergency EXIT „left“
12112 0027	121/34	emergency EXIT „right“
12112 0028	121/35	emergency EXIT „below“
12112 0029	121/36	emergency EXIT „up-left“
12112 0030	121/37	emergency EXIT „up-right“
12112 0031	121/38	emergency EXIT „down-left“
12112 0032	121/39	emergency EXIT „down-right“

Further accessories and spare parts see section „Dustproof/Waterproof LED Light Fitting“ Series 164KL... in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.



Small Impact Resistant LED Emergency/Escape Sign Light Fitting Series 131 ... LED

Application:

In humid, wet and dusty locations for illuminating and indicating the escape routes.

Design:

Housing: White polycarbonate.

Diffuser: Polycarbonate, ... 201 ...

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: Highpower-LED 6.500K, $R_a > 70$ (versions ... 201) or line modules 4.000K $R_a > 80$ (versions 131 L.. ZB), 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:

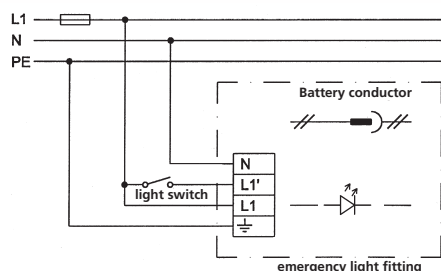
For series with self-contained battery:

– with DALI-Emergency-Electronic Device for centralized Control and 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

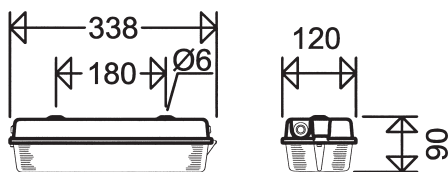


Installation: connect battery conductor

Decommission: disconnect battery conductor

Stand-by operation: do not connect L1'

series 131...



SCHUCH quality - your advantage:

- robust, impact resistant compact light fitting (entirely made from PC)
- 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)

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.



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 0100	131 201/1 W MA	5,0	180	180	36	•	•		A++	---	1,0
13112 0101	131 201/3 W MA	5,0	180	180	36	•		•	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 0001	131 201 W ZB	4,0	180	180	45	•			A++	---	0,4
13112 0011	131 L04 ZB	4,0	450	450	113				A++	1 x 8W	0,5
13112 0012	131 L07 ZB	8,0	770	770	109				A++	1 x 11W	0,5
13112 0013	131 L10 ZB	9,5	1.040	1.040	109				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.

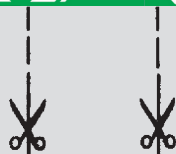


Series 131... W LED with pictogram

Self-adhesive pictogram

for identification of escape routes according to DIN EN ISO 7010 und ASR A1.3.

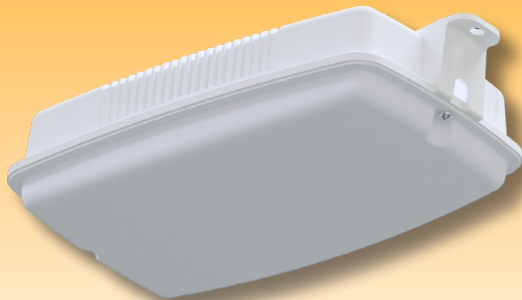
Viewing = 15m.



Accessories / Spare Parts

Article no.	Type	
Spare glasses		
13111 9001	131000W	PC opalescent white for 131... W
13111 9006	131000F	PC frosted for 131 L...
Standard pictogram, self-adhesive		
90011 0002	265/76/3	for 131... W

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series 130/131 ... LED“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.



Compact Emergency and Escape Sign Light Fitting with Highpower-LED Series 3611 ...

Application:

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: High power LED, white, 6.500K, $R_a > 70$ (version ...201) or line modul 4.000K, $R_a > 80$ (versions ...L...), 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 (2 entries at one side M20 x 1,5)

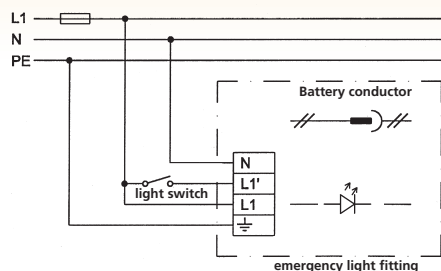
For series with self-contained battery:

– with DALI-Emergency-Electronic Device for centralized Control and 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.

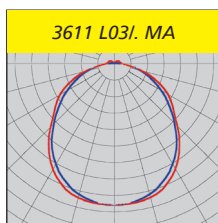
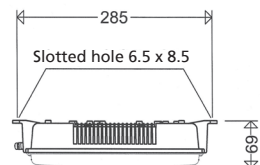
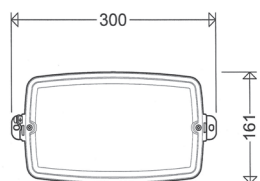
Wiring diagram maintained/stand by operation



Installation: connect battery conductor

Decommission: disconnect battery conductor

Stand-by operation: do not connect L1'



SCHUCH Quality - Your advantage:

- robust light fitting for rough environments
- 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
- easy to install due to external mounting lugs
- components are replaceable by qualified personnel on-site (no throw-away light fitting)

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 0011	3611 201/1 W MA	5,0	100	100	20	•	•		A++	1,0
36111 0012	3611 201/3 W MA	5,0	100	100	20	•		•	A++	1,4
36111 0033	3611 L03/1 MA	5,0	280	280	56		•		A++	1,0
36111 0034	3611 L03/3 MA	5,0	280	280	56			•	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.

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 0016	3611 201 W ZB	4,0	100	100	25	•			A++	0,9
36111 0035	3611 L05 ZB	5,0	550	550	110				A++	0,9
36111 0036	3611 L10 ZB	10,0	970	970	97				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	
spare diffusers		
36004 9003	3611/03	PC, frosted
36004 9002	3611/02	PC, white opalescent
Self adhesive legends		
12112 0101	220/110/33	Emergency exit to the left
12112 0102	220/110/34	Emergency exit to the right
12112 0103	220/110/35	Emergency exit below

Accessories and spare parts please see section „Dustproof/Waterproof LED Light Fitting with Diffuser Series 3611 ... LED“ in our catalogue. When ordering electronic parts or battery sets please always mention the article no. of the respective fitting.

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 Ethane Ethyl acetate Ammonia Ethyl chloride Benzol Acetic acid Carbon monoxide Methanol Methyl chloride Naphthalene Phenol Propane Toluol	i-amyl acetate n-butane n-butyl alcohol Cyclohexane 1,2-dichloroethane Acetic anhydride	Gasoline Diesel fuel Aviation fuel Heating oils n-hexane	Acetaldehyde	-	
IIB	Town gas	Ethylene Ethyl alcohol	Hydrogen sulphide	Ethyl ether	-	
IIC	Hydrogen	Acetylene			-	Carbon disphide
I	Methane					

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.

EN 60079-7	- stands for: „Increased safety“	- code: „e“
EN 60079-1	- stands for: „Flameproof enclosure“	- code: „d“
EN 60079-5	- stands for: „Sand filling“	- code: „q“
EN 60079-2	- stands for: „Pressurised apparatus“	- code: „p“
EN 60079-11	- stands for: „Intrinsic safety“	- code: „i“
EN 60079-18	- stands for: „Moulding“	- code: „m“
EN 60079-15	- stands for: „Zone 2“	- code: „n“
EN 60079-28	- stands for: „Limitation of optical radiation“	- code: „op is“
EN 60079-31	- stands for: „Protection by enclosure“	- code: „t“

Table of ingress protection

	1 st CHARACTERISTIC NUMERAL	2 nd CHARACTERISTIC NUMERAL	Symbol
RA- TING	PROTECTION AGAINST FOREIGN BODIES	PROTECTION AGAINST HARMFUL ENTRY OF WATER	
IP 20	solid objects > 12 mm	non-protected	
IP 23	solid objects > 12 mm	protected against spraying water	
IP 40	solid objects > 1 mm	non-protected	
IP 43	solid objects > 1 mm	protected against spraying water	
IP 44	solid objects > 1 mm	protected against splashing water	
IP 54	dust protected	protected against spraying water	 
IP 55	dust protected	protected against water jets	  
IP 65	dust tight	protected against water jets	  
IP 66	dust tight	protected against heavy seas	  
IP 67	dust tight	protected against effects of immersion in water between 15cm and 1m for 30 minutes	  
IP 68	dust tight	protected against effects of immersion in water under pressure for long periods	
IPx9k	dust tight	protected against effects of high pressure water jets	

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)	Thermoplasti- sches Polyester (PBT)
Acetone	–	–	–
Ethylalcohol (to 30 %)	o	o 96% ¹⁾	+
Battery acid	+	+	k.A.
Ammoniac	+	–	+ bis 10% ¹⁾
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% ¹⁾	+
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	+	+	+ bis 10% ¹⁾
Sodium hydroxide Solution 20-25 °C	+	–	+
Petroleum	o	o	+
Phosphoric acid Concentrated	–	+ 10 bis 30% ¹⁾	+ 25% ¹⁾
Soap liquor (at 23 °C)	+	o	bis 10% OK
Sulfuric acid H2SO4	–	–	–
Sulfuric acid up to 30%	+	+	+ bis 10% ¹⁾
Sulphur dioxide dry (at 23 °C)	–	o	k.A.
Turpentine (at 23 °C)	+/o	–	+
Toluene	–	–	–
Acidity of wine	+ bis 50% ¹⁾	+ bis 10% ¹⁾	k.A.
Citric acid up to 20 %	+	+	+ bis 10% ¹⁾

Legend: + = resistant, O = limited resistant – = volatile (unstable) ¹⁾ = 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, aluminium 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.

Summery of the products

Series	Page
110	58
110 H50	59
130/131	55
131	157
131 W MA (emergency light fitting)	158
131 ZB	158
140	64
144	47
144 AUS	48
161 DIMC	39
161 MA (emergency light fitting)	150
161 SENS	40
161 T40	41
161 T40/H	41
161 VARIO	44
161 VARIO AUS	45
161 VARIO LM	46
161 ZB	151
161/162	38
161/162 AUS	41
161/162 DIMD	39
161/162 H50	40
161/162 H50 MA (emerg. light fitting)	152
161/162 IFS	42
161/162 LM	42
161/162 LM H	43
161/162 LM T40	43
161/162 TB	40
163 G2 MA (emergency light fitting)	153
163 G2 SENS	51
163 G2 ZB	154
163/164 G2	49
163/164 G2 DIMC	50
163/164 G2 DIMD	50
163/164 IFS	51
164KL G2	54
164KL MA (emergency light fitting)	155
164KL ZB (emergency light fitting)	156
167 BASIC	53
181/182	60
188	60
188 T	62
188 TB	62
190	60
192	60
287	105
3301	70
3301/3302 IFS	72
3302	70
3302 V	73
3305	74
3305 IFS	75
3401/3402 G2	76
3403	78
3405	80
3610	56
3611	57
3611 MA (emergency light fitting)	159
3611 ZB (emergency light fitting)	160
42 AL VARIO	93

Series	Page
42 VARIO M	95
4210	34
4216	34
43 L	99
46	97
47	89
47 A	122
47 ABX	91
47 FUE	92
48	84
48 A	120
48 ABX	86
48 VARIO	87
49	103
541 C OR	112
543 C	114
544	106
544 AB	107
544 ABX	107
544 R	107
553 C	116
556	108
556 C	109
557	110
557 C	111
564/565	118
59	101
7571 1603A	130
7572 3203A	130
7573 6403A	130
7600 A VARIO	124
7600 VARIO	132
7700	134
7700 A	126
7800	136
7800 A	128
7900	138
8040	35
8118	35
AL (EX)	32
AL (FR)	65
CUPINA	108
d9000	18
DUEVO MID	70
DUEVO XL MID	74
DV (EX)	33
DV (FR)	66
e840	12
e840 PM	13
e855	14
e856	16
e864	10
e865	8
FILOS VARIO AL	93
FILOS VARIO M	95
FOCO L (7700 A)	126
FOCO L (7700)	134
FOCO VARIO (7600 A)	124
FOCO VARIO (7600)	132
FOCO XL (7800 A)	128

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EXPERIENCE
over
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