



PREFACE

DOSE – Innovative and Aware of Traditions

Our recipe for success is a mixture of two important values – innovation and tradition – they are the foundation on which we build, now and in the future.

Despite all tradition, which we can refer to, we never forget to move forward – as tradition does not mean standstill.

Despite all innovation which we pursue, we never forget what enables us to take these new paths – as innovation does not mean forgetting the tried and trusted.

Expertise – High Quality – Established Service – Approved Quality

- We assure **expertise** in the supervision and technical support on site – worldwide.
- The **high quality** of our product range is self-explaining and the primary concern of our company, because at the end of the day you will be judged by what you are offering to your customers.
- For us **established service** means customer care in all situations – from the friendly support over the phone right up to the delivery - we're happy to help you.
- **Approved Quality** – with every new order we take up the challenge of proving our quality requirements once more, not just concerning service but also product quality.

New Design – New Catalogue – New Naming – New Layout

- We have the finger on the pulse of time and an open ear for our customers. Our newly designed website conveys that visually.
- A **new catalogue** offers our customers an even more appealing and clear overview of our range.
- We want to simplify the access to our products – for this purpose we have introduced new product names. Names allow associations and hence are easy to remember.
- The catalogue's **new layout** – a clear tripartition in image, description and technical illustration allows you to capture relevant data at a glance and makes the order process easier.

The new DOSE catalogue represents the company's next evolutionary step towards transparency and more customer friendliness.

...and best of all: further developments are in progress...

Thank you for your attention and enjoy our new catalogue.

Thorsten Marquardt

DOSE VISION

Quality with tradition for over 90 years

For over 90 years our family business has been developing durable and resistant products for a secure electricity and light supply on the high seas.

Founded 1920 as specialists for ships electrics, we consequently expanded our product range to other maritime areas. Nowadays it ranges from marine lighting, spotlights and searchlights to container sockets and electric installation material and is orientated towards potentially explosive areas.

Professional advice, dependable delivery, fast order processing as well as a high safety standard are guaranteed through our qualified employees and the latest manufacturing technology.

Quality guarantee: Close contact to the customer

The close contact to our customers, partners and employees plays an important role – especially for us as a family business. It ensures that we can provide practical products on which you can rely when it comes down to it.

Next to our comprehensive standard product range we also develop solutions together with our customers, which fulfil more individual requirements. Starting with special series in brass and red brass through to spotlights or searchlights, made to suit your needs. Feel free to contact us, we are happy to help.



Our focus: Quality products for your safety

DOSE stands for quality: Since our foundation, crew complement from all over the world have been able to rely on the quality of the DOSE products, one hundred per cent. We put our trust in ongoing quality controls, from the production to the delivery and beyond. Only when you are satisfied, we are satisfied.

Modern technology is principally used in our products, however it has to meet our high quality requirements and offers an added value in terms of usability or durability.

Absolute reliability in every phase of the cooperation is guaranteed by our quality management system, according to DIN EN ISO 9001.

Your efficient partner - worldwide

Our head office in Hamburg is amongst other things responsible for the areas quality management, product development, marketing and customer service. Modern manufacturing facilities are located in Portugal and Czech Republic. Our company representatives in over 26 shipyards location all over the world take care of the personal contact on site.

Specialists of today and tomorrow

Offering qualitative products doesn't just mean optimising production processes, it also means guiding and training employees properly. That's why it is important for us to offer the specialists of tomorrow apprenticeships.



International Agencies



HEAD OFFICE HAMBURG
KARL DOSE GMBH
Försterweg 73-77
22525 Hamburg
Germany

Phone: +49-40-547322-0
Fax: +49-40-547322-99

E-mail: sales@karl-dose.de
www.karl-dose.com

AUSTRALIA
VERSALUX (AUSTRALIA) PTY.
1 Apollo Court
Blackburn
Phone: 0061-75502-9065
Fax: 0061-75502-9107
E-mail: rgibson@versalux.com.au

BRAZIL
MINURA ESTABLISHMENT LTD.
Rua Cupertino Durao, 25#201
Rio de Janeiro - RJ, CEP: 22.441-030
Phone: 0055-212 239 187 9
Fax: 0055-212 239 187 9
E-mail: cferreira@alternex.com.br

CANADA
JASTRAM TECHNOLOGIES LTD.
188 Bunting Rd., Unit#10
St.Catharines, Ontario
Phone: 001-905-641-2587
Fax: 001-905-6415267
E-mail: DColeman@jastram.com

CHILE
COPRESER LTDA.
San Martin No. 162, Loc. 09
Galleria Ruiz-Tagle
Phone: 0056-41-3122144
Fax: 0056-41-920807
E-mail: copreser@entelchile.net

CHINA
DAN MARINE (FAR EAST) LTD.
Floor 28, Flat B, Huadu Mansion, 838
200122 Shanghai
Phone: 0086-21-616422-33
Fax: 0086-21-616422-98
E-mail: louis@dan-marine.com

CROATIA
A.B. MARINE D.O.O.
Set XIII div. 121
51000 Rijeka
Phone: 00385-51-436413
Fax: 00385-51-436500
E-mail: a.b.marine@ri.t-com.hr

EGYPT
COMMERCE
El Golf Area, 61 El Thawra Str:
Heliopolis, Cairo
Phone: 0020-2-24170022
Fax: 0020-2-24173350
E-mail: commerce@commerceco.net

FINNLAND
EPOMARE OY
Rykmentintie 4
20810 Turku
Phone: 00358-2-2351500
Fax: 00358-2-2351499
E-mail: martti.sundqvist@epomare.fi

FRANCE
SEIMI EQUIPEMENTS MARINE
75 Rue Amiral Troude
CS 41809, 29218 Brest Cedex 2
Phone: 0033-02-98461102
Fax: 0033-02-98433749
E-mail: eric.dufaur@seimi.com
E-mail: daniel@seimi.com

GREAT BRITAIN
MAC LEAN ELECTRICAL
Peterseat Park, Peterseat Drive
AB123HT Aberdeen
Phone: 0044-1224-894212
Fax: 0044-1224-894212
aberdeen@maclean.co.uk

GREECE
MASS S.A.
344, Eleftheriou Venizelou Avenue
17675 Kallithea-Athens
Phone: 0030-194 198 - 06
Fax: 0030-194 076 - 88 (-90)
E-mail: savvas@mass.gr

INDIA
ELCOME MARINE SERVICES PVT.LTD.
Great Eastern Summit A., 11th Floor,
Plot.No.56, Sector 15, 400614 Navi
Mumbai
Phone: 0091-22-676 180 00
Fax: 0091-22-671 246 94
E-mail: nazia.noor@elcomeindia.com



**ITALY
ACERBI S.R.L.**

Via Spataro 36
15151 Genova
Phone: 0039-10-4695099
Fax: 0039-10-4695190
preventivi@acerbigenova.it
orietta.d@acerbigenova.it

**KOREA
STEIN SOHN KOREA**
#719 Byucksan Digital Valley, 132-7 Gam-
jeon-Dong, Sasang-Ku, Busan 602-030
Phone: 0082-51-329-7979
Fax: 0082-51-329-7080
E-mail: dhsong@steinsohnkorea.com
E-mail: kalee@steinsohnkorea.com

**NETHERLANDS
SOLAR NETHERLAND**
Effect 5
6921 RG Duiven
Phone: 0031-263652911
Fax: 0031-263652314
E-mail: w.heintzbergen@solarnederland.nl

**NEW ZEALAND
ELECTROPAR LTD.**
P.O. Box 58623 Botany, Manukau 2163
35, Lady Ruby Drive, East Tamaki
Phone: 0064-9-274-2000
Fax: 0064-9-274-2001
warrenc@electropar.co.nz

**NORWAY
NORTELCO A/S**
116 Manglerud, Johan
Scharffenbergs vei 95, 0694 Oslo
Phone: 004722-576100
Fax: 004722-576130
E-mail: eivind.vala@nortelco.no

**POLAND
ELECOM-MASTERTECH SPOLKA Z.O.O.**
Ul Kielecka 20
81-303 Gdyna
Phone: 0048-58-6699-244
Fax: 0048-58-6699-245
E-mail: s.staszewska@elecom.com.pl

**PORTUGAL
LENAVE LDA.**
Rua de S. Paulo, 228-230
1200-430 Lisboa
Phone: 0035121-3223190
Fax: 00351-21-3420968
E-mail: pedro.pedro@lenave.pt

**ROMANIA
RETEC S.A.**
402 Building, 1st floor, 132 Alexandru
Moruzi Str., 800232 Galati
Phone: 0040-236-448022
Fax: 0040-236-449146
E-mail: purchasing@retec.ro

**RUSSIA
JUSTUXIA OY**
4-6, 17th line V.O.
199034 St. Petersburg
Phone: 007-812-9379450
Fax: 007-812-3260966
E-mail: sergei.ponomarev@justuxia.fi

**SINGAPORE/MALAYSIA
SPRINGER EMS PTE. LTD.**
Springer EMS Pte. Ltd., 66, Tannery Lane
06-05 Sindo Building, Singapore 347805
Phone: 0065-745 330 0
Fax: 0065-746 637 4
E-mail: mike@springer-ems.com

**SPAIN
UNILUX GEOMAR S.A**
Poligono Industrial Valmor C/Diamante,
Nave 55, 28340 Valdemoro-Madrid
Phone: 0034-91-8752290
Fax: 0034-91-8752291
E-mail: alvaro@uniluxgeomar.com

**TURKEY
GEPASHIP MARKETING
INDUSTRY & TRADE CO. LTD.**
Yakamoz Sokak No. 10, Aydintepe Mahallesi,
(P.O. Box 7), Tuzla, 34947 Istanbul
Phone: 0090-216-3929396
Fax: 0090-216-3927758
E-mail: mete.tarihmen@gepaship.com
E-mail: alper.goncencer@gepaship.com

**USA
TECHNICO MARINE CORPORATION**
141 Beard Street Bldg. 15
11231 Brooklyn, New York
Phone: 001-718-855-3700
Fax: 001-718-855-3754
E-mail: TMCNY@aol.com

**U . A . E
PROFEN GENERAL TRADING LLC**
181926
Dubai
Phone: 00971-4-2289927
Fax: 00971-4-2289947
E-mail: director@profenis.com





LIGHTING FOR SHIPS



EQUIPMENT FOR
ELECTRICAL INSTALLATIONS



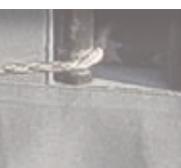
CONTAINER SOCKETS



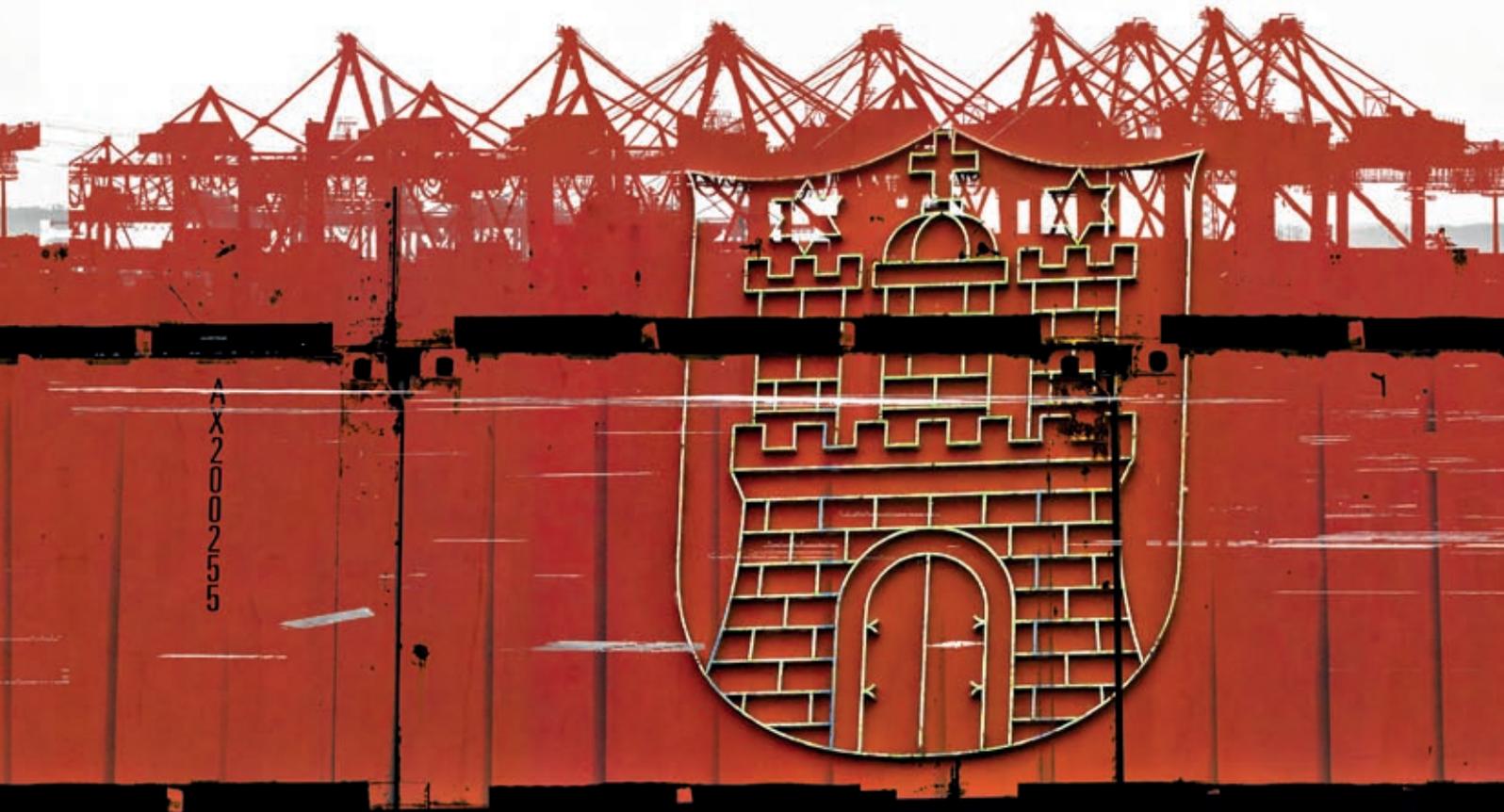
CABLE INSTALLATION



EQUIPMENT FOR
HAZARDOUS AREAS



NAVY EQUIPMENT



LIGHTING FOR SHIPS
EQUIPMENT FOR ELECTRICAL INSTALLATIONS
CONTAINER SOCKETS
CABLE INSTALLATION

EQUIPMENT FOR HAZARDOUS AREAS

NAVY EQUIPMENT



Explosion Protection Programme by DOSE

Over 90 years Karl Dose in Hamburg,
your specialist in ship's electrics.

DOSE was the first to develop a base
product range for potentially explosive
areas on board of ships – the EX-range.

It contains junction boxes, switches, plugs
and socket devices, lamps and floodlights.
They have protection class IP 56 or
higher and are licensed according to the
current guideline ATEX 100a (former
ATEX 94/9/EG). Next to permissions
from the PTB (German National
Metrology Institute), approvals from
the German Lloyd are also at hand. On
request authorisations issued by further
classification societies can be obtained.





To be able to ensure our high quality standard in our EX-range, DOSE's EX-products are checked continually. These checks happen company-intern and extern, whereby the latest testing procedures are used to examine their optimisation possibilities. Perfection is our nature.

Currently DOSE is converting a lot of lamps and spotlights from the EX-range to energy efficient and durable LED-illuminants. If you have any questions – concerning these changes or in general, feel free to ask.



At home in a safe harbour!

Every sailor is
happy, if he can

rescue himself and his ship into a safe harbour from a storm. With the explosion proof DOSE products you won't even run into danger. To be able to withstand all odds, our products were and still are tested to the highest standards.

With DOSE you are always at home in a safe harbour. DOSE products in accordance with ATEX 100 are named by famous harbours. Hamburg is one of them.



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At present the **Ex-programme**, which was specially developed for use on ships, comprises of:

- Junction boxes
- Switches
- Plug appliances
- Lights
- Fluorescent light fittings
- Emergency light fittings
- Floodlights

and is now updated by

- Ex-tube light
- Ex-light 12/24V up to 25W

All items at least have protection type **IP 56** and are certified acc. to „**ATEX**“ directive 94/9/EC (**AT**mosphere **EX**plosible)

Besides the registration of the PTB, there are also certificates from the classification society **German Lloyd** (GL). Moreover, approvals from further classification societies can be applied for on demand.

Hazardous Areas

If and what extent the premises are categorized as "endangered by explosion" is decided by the responsible supervising authority, e. g. the Shipping Cooperative Association or classification society.

Materials used in such zones must be carefully selected and be in accordance with the guidelines on the corresponding type of protection.

Basically two fuse protection types can be applied:

Fuse Protection Types

1. EN 50019 Increased Safety 'e'

The flame-proof protection level "Increased Safety" specification requires that measures have been taken to prevent the risks of excessively high temperatures and spark generation or arching inside internally or externally on electrical equipment more safely where these risks would not occur during normal operation.

2. EN 50018 Pressure-Resistant Enclosure 'd'

The flame-proof specification "Pressure-Resistant Enclosure" requires that components which might ignite a potentially explosive atmosphere shall be sealed in an enclosure that will withstand the internal pressure generated during the spreading of an explosive mixture inside the enclosure and will prevent the spreading of the explosion to the potentially explosive atmosphere surrounding the building.

In Short:

Increased safety 'e' means to prevent an explosion.

Pressure-resistant enclosure 'd' means to contain an explosion.

In practice, both specifications are frequently used in combinations (e. g. the component where a spark might originate, is housed in a pressure-resistant enclosure. The terminal compartment with the terminals is designed to meet the specification "Increased Safety").

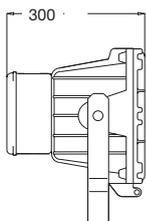
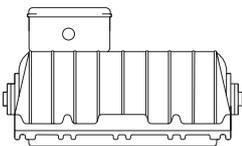
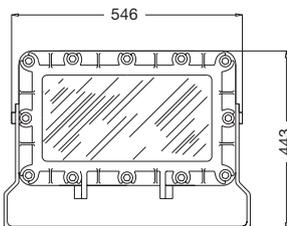
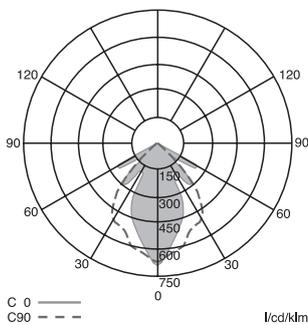
Temperature ranges

Temperature ranges	Max Surface temperature
T1	450°
T2	300°
T3	200°
T4	135°
T5	100°
T6	85°

All dimensions, weights and construction details given in this catalogue are noncommittal. Please contact us if you require our scale drawing for construction purposes.

Rights reserved for technical amendments.



Hamburg
LXH500**Technical Data**

Name & No.	Wattage	kg	Description
Hamburg LXH500	500W	23,00	<ul style="list-style-type: none"> • IP 67 • plastic cable gland: M25x1.5 and 1 x blind plug M25x1.5 • without lamp • Ex-proof floodlight for halogen lamps 500W (230/240V) with lampholder E40. Housing, glass-holding frame and bracket made of aluminium, special paint finish in grey colour. Glas holding frame with sealed borosilicate glass, with stainless steel screws (undetachable) • hinged glass holding frame. Separate Ex-e terminal box with 1x M25 plastic cable gland and cable gland: M25 plastic blind plug • 230V +/- 10% • 50 / 60 Hz • permissible ambient temperature: -20°C to +40°C. Insulation class: I Certificate: BVS 09 ATEX E 50 x. Type of protection: EEx de IIB T3, zone 1 and zone 2

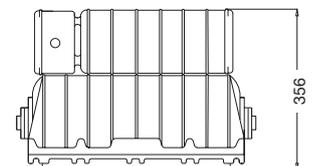
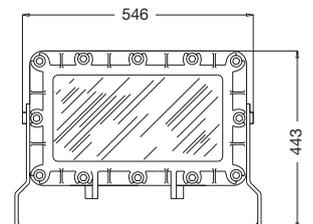
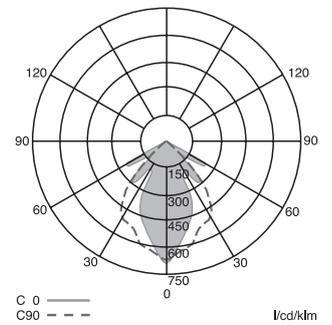


Hamburg
LXN400

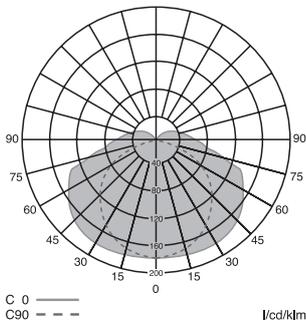
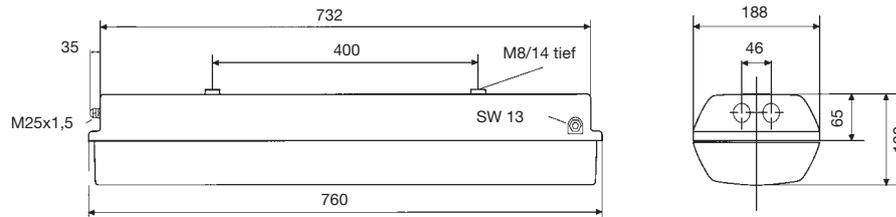
Technical Data

Name & No.	Wattage	kg	Description
Hamburg LXN400	400W	31,00	<ul style="list-style-type: none"> • IP 67 • housing, glass-holding frame and bracket made of aluminium, special paint finish in grey colour. • plastic cable gland: M25x1.5 and 1 x blind plug M25x1.5 • without lamp • Hinged glass holding frame with sealed borosilicate glass, with stainless steel screws (undetachable). Ballast unit and ignitor isolated from the lamp in a separate compartment, thus ensuring that the heat of the lamp does not have any harmful effects. Ballast fitted with connection plug to allow easy removal for servicing purposes • 230V +/- 10% • 50 / 60 Hz • permissible ambient temperature: -20°C to +40°C. • Insulation class: I, Certificate: BVS 09 ATEX E 147, 162. • Type of protection: EEx de IIB T3, zone 1 and zone 2

Different voltage, frequency and wattage on request.



Ex Fluorescent Light Fittings 2x18W

Rotterdam
EXL218

Technical Data

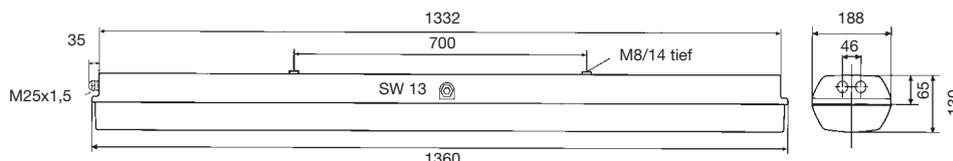
Name & No.	Wattage	kg	Description
Rotterdam EXL218	2 x 18W	4,60	<ul style="list-style-type: none"> • IP 66 • housing made of glass mat reinforced polyester, protective cover made of polycarbonate, plastic cable gland • cable gland: M25x1.5 • incl. lamp • 50 / 60 Hz • ex-protected fluorescent light fitting with 2 channel electronic ballast unit for bi-pin fluorescent lamps (G13) 2x18W. Double-sided lock with 10 latch points. Protective cover hingeable on both sides. Automatic switch built as a safety disconnecter acc. to EN 60947. Automatic switch ensuring the disconnection of all exposed components when the fitting is opened. Large terminal compartment with 6 terminals up to 6 mm². • rated voltage: AC 110V-254V +/- 10%, 47-63Hz, DC 110V-230V +/- 10%. Rated current: 0,18A; Cos phi: 0,95 (230V) • permissible ambient temperature -25°C to +50°C. Insulation class I, single ended through-wiring. Certificate: BVS 09 ATEX E 147, 162 Type of protection: Ex eds IIC T4 for zone 1, zone 2.

Spare Parts

No.	kg	Description
EXL/WA18	1,28	Polycarbonate cover
EXL/SS13	0,10	Hexagon key
EXL/KB	0,35	Terminal strip
EXL/RKS	0,15	Reflector flaps with lampholder G13
EXL/EVG18	1,80	Electronic ballast unit
EXL/DB	0,25	Mounting bracket
EXL/RS14	0,31	Mounting device

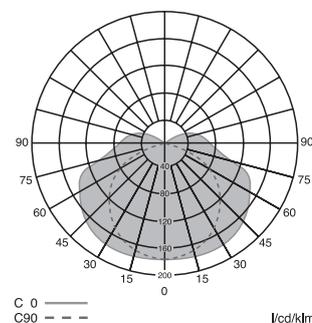


Rotterdam
EXL236



Technical Data

Name & No.	Wattage	kg	Description
Rotterdam EXL236	2 x 36W	6,70	<ul style="list-style-type: none"> • IP 66 • housing made of fibre glass reinforced polyester, protective cover made of polycarbonate, plastic cable gland • plastic cable gland: M25x1.5 • without lamp • 50 / 60 Hz • ex-protected fluorescent light fitting with 2 channel electronic ballast unit for bi-pin fluorescent lamps (G13) 2x36W. Double-sided lock with 20 latch points. Protective cover hingeable on both sides. Automatic switch built as a safety disconnecter acc. to EN 60947. Automatic switch ensuring the disconnection of all exposed components when the fitting is opened. Large terminal compartment with 6 terminals up to 6 mm². • rated voltage: AC 110V-254V +/- 10%, 47-63Hz, DC 110V-230V +/- 10%. Rated current: 0,34A; Cos phi: 0,95 (230V) • permissible ambient temperature -25°C to +50°C. Insulation class I, single ended through-wiring. Certificate: BVS 09 ATEX E 147, 162 Type of protection: Ex eds IIC T4 for zone 1, zone 2.

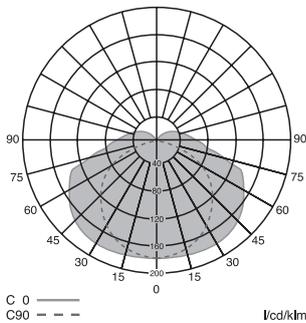
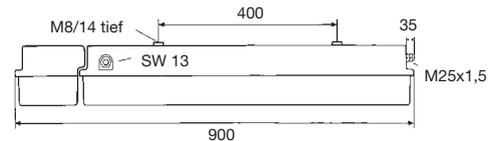
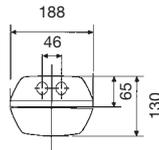


Spare Parts

No.	kg	Description
EXL/WA36	1,28	Polycarbonate cover
EXL/SS13	0,10	Hexagon key
EXL/KB	0,35	Terminal strip
EXL/RKS	0,15	Reflector flaps with lampholder G13
EXL/EVG36	1,80	Electronic ballast unit
EXL/DB	0,25	Mounting bracket
EXL/RS14	0,31	Mounting device



Ex Emergency Light Fittings 2x18W

Rotterdam
EMC218

Technical Data

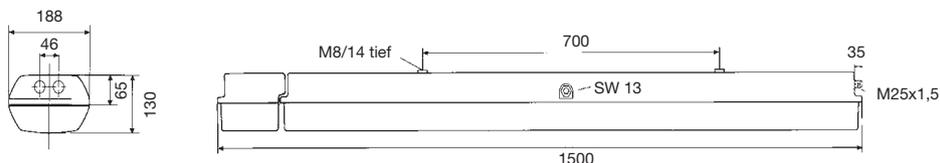
Name & No.	Wattage	kg	Description
Rotterdam EMC218	2 x 18W	10,00	<ul style="list-style-type: none"> • IP 66 • housing made of fibre glass reinforced polyester, protective cover made of polycarbonate, plastic cable gland • plastic cable gland: M25x1.5 • without lamp • 50 / 60 Hz • ex-protected fluorescent light fitting with 2 channel electronic ballast unit for bi-pin fluorescent lamps (G13) 2x18W. Double-sided lock with 10 latch points. Protective cover hingeable on both sides. Automatic switch built as a safety disconnecter acc. to EN 60947. Automatic switch ensuring the disconnection of all exposed components when the fitting is opened. Large terminal compartment with 6 terminals up to 6 mm². Rated voltage: AC 220V-254V +/- 10%, 47-63Hz. • rated current: 0,23A; Cos phi: 0,95 (230V) • permissible ambient temperature -5°C to +50°C. Light fitting with 7 Ah-NC battery, for 1,5 or 3 h emergency operation; local setting. Battery charging method with intelligent microelectronics. The required function and duration test is automatically performed with emergency operations or requested after 6 months. A necessary battery replacement will be indicated by the LED indicator. Insulation class I, single ended through-wiring. Certificate: BVS 09 ATEX E 147, 162, Type of protection: Ex eds IIC T4 for zone 1, zone 2.

Spare Parts

No.	kg	Description
EXL/WA18	1,28	Polycarbonate cover
EXL/SS13	0,10	Hexagon key
EXL/KB	0,35	Terminal strip
EXL/RKS	0,15	Reflector flaps with lampholder G13
EXL/EVG18	1,80	Electronic ballast unit
EXL/DB	0,25	Mounting bracket
EXL/RS14	0,31	Mounting device
EMC/BSN	1,91	Battery set with LED and monitoring

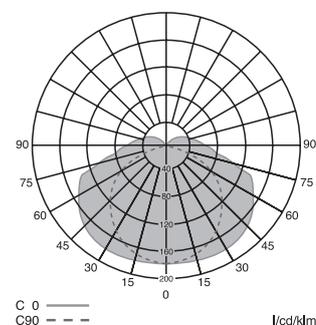


Rotterdam
EMC236



Technical Data

Name & No.	Wattage	kg	Description
Rotterdam EMC236	2 x 36W	12,00	<ul style="list-style-type: none"> • IP 66 • housing made of fibre glass reinforced polyester, protective cover made of polycarbonate, plastic cable gland • plastic cable gland: M25x1.5 • without lamp • 50 / 60 Hz • ex-protected fluorescent light fitting with 2 channel electronic ballast unit for bi-pin fluorescent lamps (G13) 2x36W. Double-sided lock with 20 latch points. Protective cover hingeable on both sides. Automatic switch built as a safety disconnecter acc. to EN 60947. Automatic switch ensuring the disconnection of all exposed components when the fitting is opened. Large terminal compartment with 6 terminals up to 6 mm². Rated voltage: AC 110V-254V +/- 10%, 47-63Hz. • rated current: 0,4A; Cos phi: 0,95 (230V) • permissible ambient temperature -5°C to +50°C. Light fitting with 7 Ah-NC battery, for 1,5 or 3 h emergency operation; local setting. Battery charging method with -intelligent- microelectronics. The required function and duration test is automatically performed with emergency operations or requested after 6 month. A necessary battery replacement will be indicated by the LED indicator. Insulation class I, single ended through-wiring. Certificate: BVS 09 ATEX E 147, 162, Type of protection: Ex eds IIC T4 for zone 1, zone 2.



Spare Parts

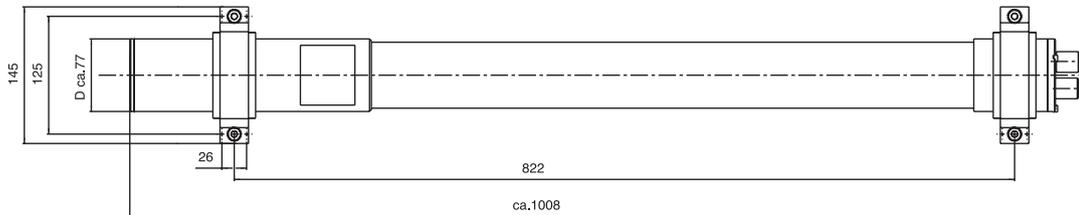
No.	kg	Description
EXL/WA18	1,28	Polycarbonate cover
EXL/SS13	0,10	Hexagon key
EXL/KB	0,35	Terminal strip
EXL/RKS	0,15	Reflector flaps with lampholder G13
EXL/EVG18	1,80	Electronic ballast unit
EXL/DB	0,25	Mounting bracket
EXL/RS14	0,31	Mounting device
EMC/BSN	1,91	Battery set with LED and monitoring



Ex-proof Battery Room Light



Palux BRL20 Ex



Palux BRL20Y Ex

Technical Data

Name & No.	Diagram	Wattage	kg	Description
Palux BRL20 Ex	O-	1 x 18W	3,60	<ul style="list-style-type: none"> • IP 56 / 68 • housing aluminium, light cover temperature change-steady polycarbonate pipe • cable gland: M18x1.5 chrome-plated acc. DIN 89280 • supply with pipe clamps, electronic ballast unit, lampholder and lamp • 86-240V AC, 154-240V DC • 50 / 60 Hz • powder coated RAL 9010 • ex-protection class: EEx ed IIC T4, PTB-No.: PTB 03 ATEX 2156. The light is amagnetic, shock (acc. BVO43) and EMV examined. Enviromental temperature -20°C to 45°C.
Palux BRL20Y Ex	O=	1 x 18W	3,70	<ul style="list-style-type: none"> • IP 56 / 68 • cable gland: M18x1.5 chrome-plated acc. DIN 89280 • supply with pipe clamps, electronic ballast unit, lampholder and lamp • 86-240V AC, 154-240V DC • 50 / 60 Hz • powder coated RAL 9010 • ex-protection class: EEx ed IIC T4, PTB-No.: PTB 03 ATEX 2156. The light is amagnetic, shock (acc. BVO43) and EMV examined. Enviromental temperature -20°C to 45°C.

Spare Parts

No.	kg	Description
EVG BRL 1x18W	0,22	Electronic ballast unit 1x18W



Hongkong
505 /D



Hongkong
505 /D



Hongkong
505 /D

Technical Data

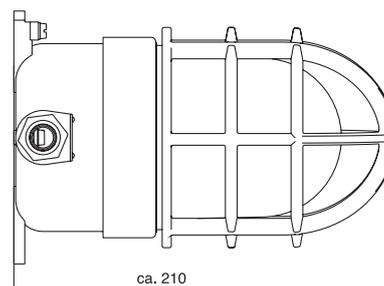
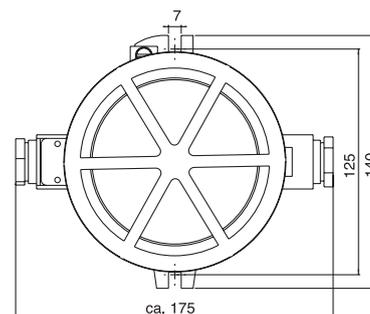
Name & No.	Diagram	Wattage	kg	Description
Hongkong 505	O-	max. 60W	2,50	<ul style="list-style-type: none"> • IP 56 • brass casing and guard, ex-glass, resistant against temperature changes • cable gland: M24x1.5 • without lamp • incl. Ex-lampholder, pressure resistant enclosure and security screw for guard • explosion-proof light for bulb DIN 49810 part 5, max 60W, PTB-No. PTB 03 ATEX 2077X • ex-protection class: EEx ed IIC T3 60W/220V), EEx ed IIC T4 (25W)), EEx ed IIC T2 (only shock protection lamp 130V/60W Merkur hangig mounting)
Hongkong 505/2	O=	max. 60W	2,60	
Hongkong 505/D	-O-	max. 60W	2,60	

Spare Parts

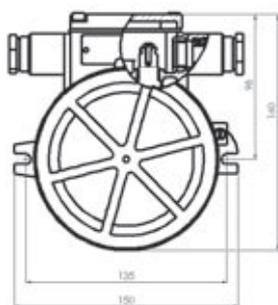
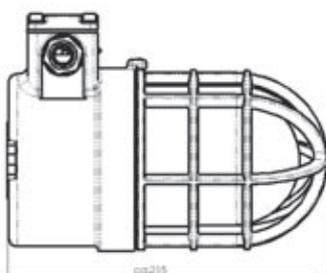
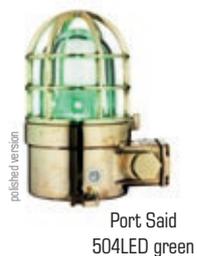
No.	kg	Description
449	0,25	Ex-lampholder E27, pressure resistant enclosure
400	0,44	Cylindrical Ex-glass 100x120mm

Polished products available for a extra charge

For extra charge also available with cylindrical ex-glass in red, blue, green and yellow.



Explosion-proof Light up to 100W



Technical Data

Name & No.	Diagram	Wattage	kg	Description
Port Said 504LED	_O_	10W	3,50	<ul style="list-style-type: none"> • IP 56 • red cast brass casing and guard, glass • cable gland: M24x1.5 • incl. LED • PTB 06 ATEX 1046 X. Ex protection class: Eex de IIC T6, pressure resistant.
Port Said 504G	_O_	max. 100W	3,50	<ul style="list-style-type: none"> • IP 56 • red cast brass casing and guard, glass clear • cable gland: M24x1.5 • incl. lamp (60W or 100W) • 230V • explosion-proof light PTB 06 ATEX 1046 X. Pressure resistant enclosure. Temperature class depends on installation.
Port Said 504SI	_O_	max. 20W	3,50	<ul style="list-style-type: none"> • IP 56 • red cast brass casing and guard, glass clear • Cable gland: M24x1.5 • incl. lamp • 230V • explosion-proof light up to 20W PTB 06 ATEX 1046 X. Pressure resistant enclosure. Temperature class: With fluorescent bulb Philips SL E Pro 230V/20W, only with installed temperature switch hanging T6 variable T4
Port Said 504SL	_O_	max. 26W	3,90	<ul style="list-style-type: none"> • IP 56 • red cast brass casing and guard, glass • cable gland: M24x1.5 • incl. lamp and electronic ballast • 110V / 230V • explosion-proof light up to 26W PTB 06 ATEX 1046 X. Pressure resistant enclosure. Temperature class: With fluorescent bulb Osram/Dulux T/E in 26W 840 Plus 110V or 230V requires electronic ballast unit variable T4

Spare Parts

No.	kg	Description
504SG	1,30	Spare glass with red cast brass guard
453	0,05	E27 double bracket lampholder, shake protected
455	0,06	E27 triple bracket lampholder, shake protected
5042	0,11	Electronic ballast unit 230V 26W
5043	0,13	Electronic ballast unit 110V 26W

Polished products available for an extra charge

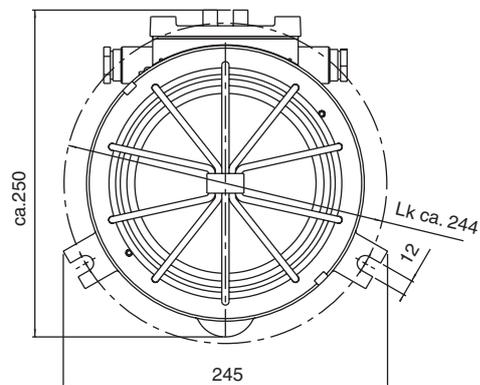
For extra charge also available with colored glass enamelled. Also available with cable gland M18x1.5.



Wellington 3312

Technical Data

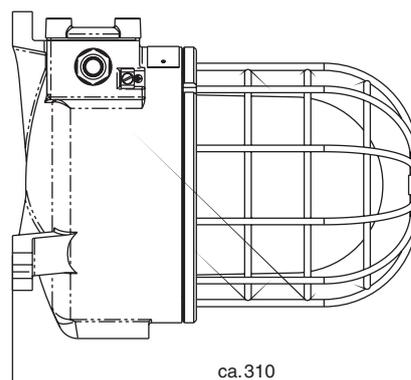
Name & No.	Diagram	Wattage	kg	Description
Wellington 3312	_O_	max. 200W	13,60	<ul style="list-style-type: none"> • IP 56 • red cast brass casing and glass ring, brass wire-guard, glass • cable gland: M24x1.5 • explosion-proof light up to 200W, with security switching arrangement. PTB-No. PTB 03 ATEX 1111, ex-protection class: EEx de IIC T3+T4 Pressure resistant enclosure. Temperature class: hanging installation T4 - bulb up to 150W metal alloy bulb up to 160W* mercury vapour 80W* T3 - bulb up to 200W mercury vapour 125W* fluorescent bulb E 27 25W* T5 - DULUX EL 23 *Ignition and ballast unit required



Spare Parts

No.	kg	Description
3351	4,25	Spare glass with wire-guard, red cast brass glass ring
501/5	0,04	Inner hexagonal key 5mm
453	0,05	E27 double bracket lampholder, shake protected
460	0,04	B22 double bracket lampholder

Polished products available for an extra charge



5061
5061/D

Acapulco

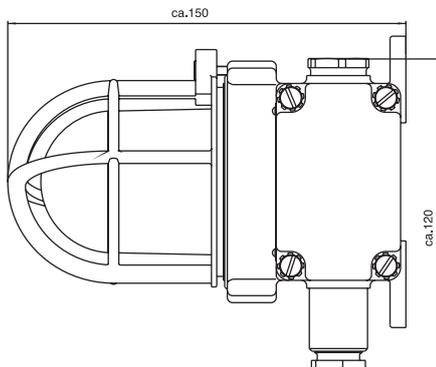
Ex-proof Light 12/24V max. 25W

karl-dose.de/Acapulco



Technical Data

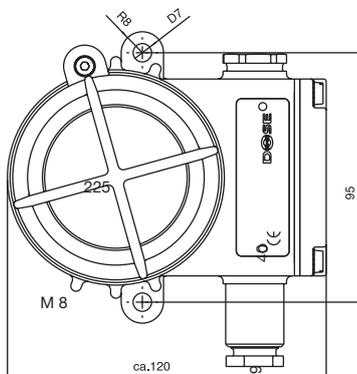
Name & No.	Diagram	Wattage	kg	Description
Acapulco 5061	O-	max. 25W	1,80	<ul style="list-style-type: none"> • IP 56 • brass casing and guard, cylinder glass: thermal glass, clear and shock resistant • cable gland: M24x1.5 • incl. lampholder and lamp (selectable) • 12V / 24V • explosion-proof light for lamps up to 25W, 12V/24V. PTB-No.:PTB 03 ATEX 1106, Ex-protection class: EEx de IIB T3-T4. Casing and guard protector made of cast brass. Connection-box raised protection, lamp pressure-proof housing. Cylinder glass: thermal glass, clear and shock resistant. Application: Flammable materials group II B T3-T4.
Acapulco 5061/D	-O-	max. 25W	1,90	



Spare Parts

No.	kg	Description
5061SG	0,48	Guard protector with glass, glued
467	0,03	B15d double bracket lampholder

Polished products available for an extra charge
For extra charge also available with cylindrical ex-glass in red, blue, green and yellow.





Shanghai 510/4

polished version

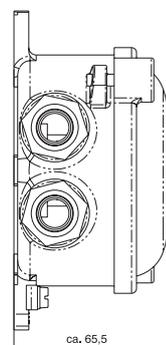
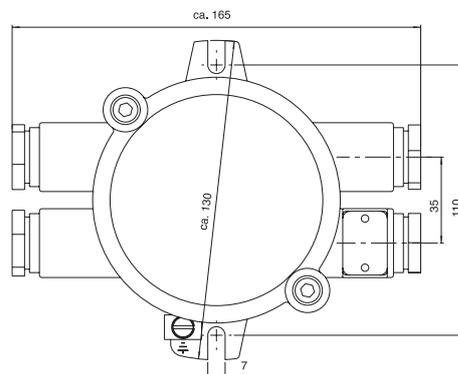
Technical Data

Name & No.	Diagram	kg	Description
Shanghai 510	-O-	1,05	<ul style="list-style-type: none"> • IP 56 • brass casing and cover, steatite ex-terminal blocks, brass cover wedge terminals
Shanghai 510/2	O=	1,10	<ul style="list-style-type: none"> • cable gland: M18x1.5 • undetachable inner hexagonal cover screws, 2 steatite ex-Terminal blocks, 2-pole, with brass cover wedge terminals and reverse motion lock, suitable for 4mm², inside and outside earth connection
Shanghai 510/3	=O-	1,22	<ul style="list-style-type: none"> • max. 750V, max. 32A • explosion-proof junction-box max. 750V. Certificate: PTB03 ATEX 1043x, ex-protection class: EEx e II T6
Shanghai 510/4	=O=	1,39	<ul style="list-style-type: none"> • max. 750V, max. 32A • explosion-proof junction-box max. 750V. Certificate: PTB03 ATEX 1043x, ex-protection class: EEx e II T6

Spare Parts

No.	kg	Description
510Abzw	0,05	Ex-terminal block
501/5	0,04	Inner hexagonal key 5mm

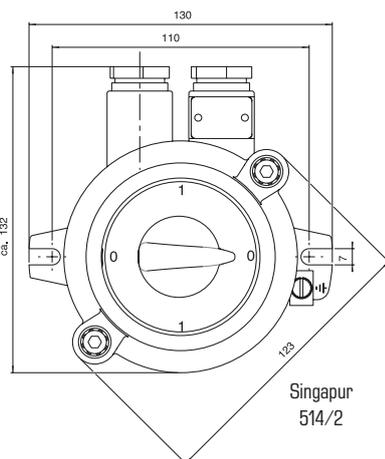
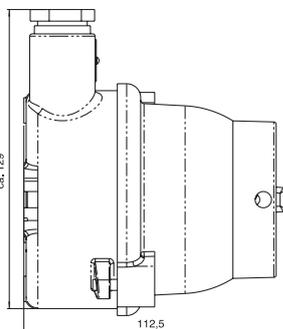
Polished products available for an extra charge



Explosion-proof Rotary Switch

Singapur
514/2

polished version

Singapur
514/2

Technical Data

Name & No.	Diagram	kg	Description
Singapur 514	-O	0,90	<ul style="list-style-type: none"> • IP 56 • brass casing and cover • cable gland: M24x1.5
Singapur 514/2	O=	0,95	<ul style="list-style-type: none"> • undetachable inner hexagonal cover screws, ex-switch interior 2-pole cut out type, inside and outside earth connection. Also available with 1-pole change over switch interior
Singapur 514/D	-O-	0,95	<ul style="list-style-type: none"> • 660V AC • 16A • explosion-proof cut out rotary switch 16A max 660V AC PTB-No.:PTB 03 ATEX 1044x, ex-protection class: EEx de IIC T6

Spare Parts

No.	kg	Description
E514A	0,14	Ex-switch interior 2-pole cut out
E514W	0,14	Ex-switch interior 1-pole change over
501/5	0,04	Inner hexagonal key 5mm

Polished products available for an extra charge



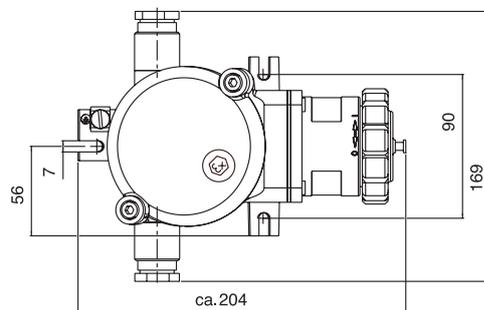
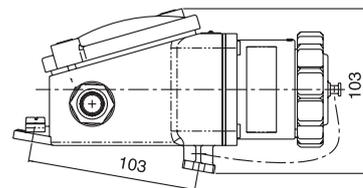
Busan
516/St



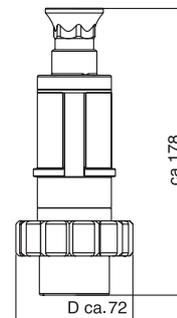
Busan
516/D

Technical Data

Name & No.	Diagram	kg	Description
Busan 516/L	-O	2,45	<ul style="list-style-type: none"> ex-socket IP 56
Busan 516/R	O-	2,45	<ul style="list-style-type: none"> brass casing, cover and bayonet cap cable gland: M24x1.5 und detachable inner hexagonal cover screws, socket insert in protection pressure resistant enclosure, security switching arrangement with locking device, inside and outside earth connections
Busan 516/D	-O-	2,55	<ul style="list-style-type: none"> 16A explosion-proof socket 16A max 240V AC, PTB-No.03 ATEX 1050x, ex-protection class EEx ed IIC T6/T5. Nominal voltage: 100V-130V 4h 200V-240V 6h
Busan 516/St		1,18	<ul style="list-style-type: none"> ex-plug IP 56 Brass plug sleeve and bayonet ring 16A explosion-proof plug 16A max 240V AC, PTB 03 ATEX 1050x, Ex-protection class EEx ed IIC T6/T5. Nominal voltage: 110V-130V 4h, 220V-240V 6h



Busan 516/D



Busan 516/St

Spare Parts

No.	kg	Description
5160	0,75	Ex-socket insert 16A with brass flange and gasket
501/5	0,04	Inner hexagonal key 5mm
5161	0,14	Ex-plug interior 16A

Polished products available for an extra charge

When ordering, please state position of earth contact (o'clock position) or operation voltage.





Spare Parts

Equipment for Hazardous Areas

karl-dose.de



E514A / E514W



5161



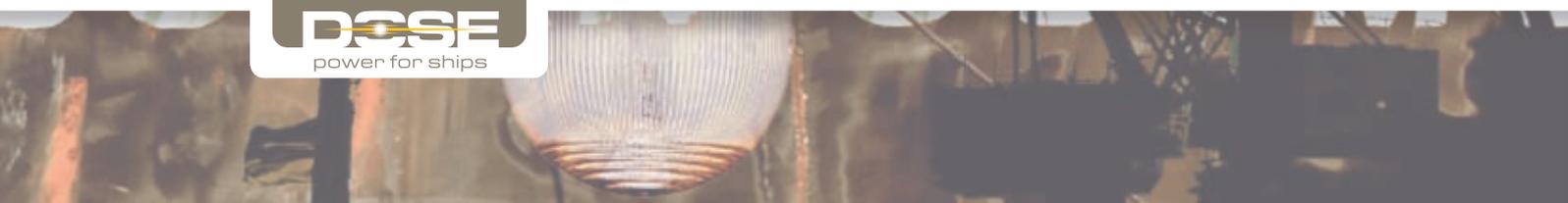
510Abzw



449

Spare Parts

No.	for	kg	Description
EXL/WA18	EXL/EMC218	1,28	polycarbonate cover
EXL/WA36	EXL/EMC236	1,28	polycarbonate cover
EXL/SS13	EXL/EMC218/236	0,10	hexagon key
EXL/KB	EXL/EMC218/236	0,35	terminal strip
EXL/RKS	EXL218/236	0,15	reflector flaps with lampholder G13
EMC/RKS	EMC218/236	0,15	reflector flaps with lampholder G13
EMC/BSN	EMC218/236	1,91	battery set with LED and monitoring
EXL/EVG18	EXL218	1,80	electronic ballast unit
EXL/EVG36	EXL236	1,80	electronic ballast unit
EMC/EVG18	EMC218	2,60	electronic ballast unit 220-254V AC
EMC/EVG36	EMC236	2,60	electronic ballast unit 220-254V AC
EXL/DB	EXL/EMC218/236	0,25	mounting bracket
EXL/RS14	EXL/EMC218/236	0,31	mounting device
EVG BRL 1x18W	BRL20	0,22	electronic ballast unit 1x18W
400	505	0,44	cylindrical Ex-glass 100x120mm





510/5



5160



5061SG

Spare Parts

No.	for	kg	Description
449	505	0,25	Ex-lampholder E27, pressure resistant enclosure
504SG	504	1,30	spare glass with red cast brass guard
453	504	0,05	E27 double bracket lampholder, shake protected
455	504	0,06	E27 triple bracket lampholder, shake protected
5042	504	0,11	electronic ballast unit 230V 26W
5043	504	0,13	electronic ballast unit 110V 26W
3351	3312	4,25	spare glass with wire-guard, red cast brass glass ring
460	3312	0,04	B22 double bracket lampholder
5061SG	5061	0,48	guard protector with glass, glued
467	5061	0,03	B15d double bracket lampholder
510Abzw	510	0,05	Ex-terminal block
E514A	514	0,14	Ex-switch interior 2-pole cut out
E514W	514	0,14	Ex-switch interior 1-pole change over
5160	516	0,75	Ex-socket insert 16A with brass flange and gasket
5161	516	0,14	Ex-plug interior 16A
501/5	3312, 510, 514, 516	0,04	inner hexagonal key 5mm



5061SG



400



General:

DOSE's products are manufactured in accordance with the relevant standards, regulations and DIN-HNA (German Institute for Standardization e. V. Standardization committee for Shipbuilding) stated in the working sheets in force.

The description on application area, the fixing of basic dimensions as well as allowed materials mentioned in the guidelines of the DIN-HNA, and DOSE's consequent realization and compliance control of the product signifies highest quality standard and precision, safety and reliability for DOSE's products.

DOSE products are internationally approved by all renowned classification societies and are, depending on type, tested where necessary.

DOSE produces and supplies equipment in accordance with defense equipment standards (VG-Norm) specifically for the particular requirements for the Federal Marines' ships and boats.

DOSE has been actively involved for decades in the design organization of the Standards Office Marines (NM) at the DIN (German Institute for Standardization e. V.) published regulations.

If not specifically stated in the text, casings are made of protective type IP 56 brass in accordance with EN 60529.

All dimensions, weights and construction details given in this catalogue are noncommittal. Please contact us if you require our scale drawing for construction purposes.

Rights reserved for technical amendments.

Cable Glands:

Unless otherwise indicated, all cable glands are in accordance with DIN 89280.

Fitted as standard to fittings in Chapter 1 is the M24 x 1,5 thread for use with armoured MGCG 3 x 1,5mm² cable, fitting Z 14, with:

Earthing cones	24-10 DIN 89345
Gasket	24-14 DIN 89349
Washer	24-15 DIN 89347

For exports unless otherwise indicated cable glands, fitting W 14, (non-armoured cable) are used; these are in accordance with the afore-mentioned DIN standards.

All non-metallic products will be equipped with plastic cable glands PG 13,5 or M20 (IP68)

If you have a non-standard requirement please include information about the external cable diameter with your order.

All exceptions are described in the design information.



Seal:

The sealing material used depends on the different operational conditions of the appliance and is chosen for durability.

Lampholder:

In general, unless otherwise indicated in the design information, all lights listed in Chapter 1 are supplied without lampholder. Where required, all lights can be supplied at additional charge with fixed lampholder.

Cylindrical Glasses/Globes:

Unless otherwise stated, all clear cylindrical glasses and structured globes are supplied with drip holes, whilst coloured cylindrical glasses and structured globes are generally supplied without drip holes. Where required, non-standard equipment can of course be supplied.

All lights which can be supplied with coloured glass are indicated in the design information.

Customisation:

The ability to produce customer-specific customisations and the speed with which these are manufactured illustrate the high level of performance of a competent partner.

Spare Parts:

All components of our products can be supplied as spare parts.

All measurements, weights and structural information given in the catalogue are approximate.

For structural purposes please ask for our detail drawings.

We reserve the right to modify technical specifications.

Contact us...!









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Terms and Conditions of Delivery and Payment

1. Scope

These Terms and Conditions shall be deemed valid unless otherwise agreed in writing. **Deviating and conflicting Terms and Conditions shall not be deemed binding by us.** This shall also apply if we do not explicitly raise objection or if we carry out delivery without complaint.

2. Conclusion of Agreement

- 2.1. All quotations submitted by us are subject to change at any time.
- 2.2. All agreements, telephone calls, faxes and declarations made in connection with the conclusion of this Agreement must be legally approved and signed off by us in writing in order to assume validity.
- 2.3. Terms and Conditions of Delivery and Payment defined by us shall apply exclusively, even in the event that the contractual partner submits or approves divergent Terms and Conditions. If deviating Terms and Conditions pertaining to the conclusion of this Agreement are negotiated, they must be drawn up in writing and must be approved by us.
- 2.4. As a rule, all documents, weight data, designs, etc. provided by us are deemed **only approximate**.
- 2.5. We shall reserve the right to effect changes in design, material and similar properties at any time before delivery, provided price, delivery and functionality are not impacted to the detriment of the customer.

3. Delivery timelines

- 3.1. Delivery timelines specified in our quotations are generally applicable unless an interim stock clearance is effected.
- 3.2. Unless otherwise specified in writing, our delivery timelines are **non-binding**.
- 3.3. The delivery period specified may be extended by events beyond our control, including delayed collection.
- 3.4. Partial delivery is permissible if deemed reasonable by the contractual partner.

4. Despatch, transfer of risk

- 4.1. In the absence of specific customer instructions, despatch is effected at our considered discretion, but without necessarily guaranteeing the cheapest mode of transportation.
- 4.2. Risk is transferred to the customer once the item is despatched – even in the event of a partial delivery. All transportation, including carriage-paid delivery, is deemed to be at the customer's risk. **Transit insurance is not provided by us.**

5. Prices

- 5.1. As a rule, **prices effective on the date of delivery** apply to all business transactions, even if the quotation specifies other prices. Delivery prices are, thus, aligned with current market prices. Please refer to the respective price list for an explanation of the calculation of metal surcharges.
- 5.2. Prices are quoted ex-works and exclude packaging charges. For orders accepted that are of at least EUR 500.00 net, we undertake delivery within the Federal Republic of Germany carriage paid to the receiving location exclusive of packaging carriage charges. For orders accepted that are of at least EUR 1000.00 net, we undertake delivery within the Federal Republic of Germany carriage paid to the receiving location inclusive of packaging but exclusive of carriage charges. As a rule, we accord consignments with an order value of below EUR 50.00 net a logistic lump sum of EUR 50.00.
- 5.3. All payments by customers are to be remitted to our bank without any deductions whatsoever at the latest **30 days from the date of invoice**. We guarantee a discount of 2% on all payments received within 8 days of the date of invoice (domestic conditions apply). Discounts are not applicable to payments made by means of a bill of exchange, nor in the event of payment arrears. Sums below EUR 30.00 are payable immediately net within 8 days of the invoice being received.
- 5.4. Payments made to our account by cheque and by bills of exchange shall be deemed received only upon the issue of valid credit advice pertinent to the transaction. All bank charges, collection charges and interest rate charges are to be borne by the customer.
- 5.5. In the event of non-adherence to payment timelines, we reserve the right to levy a preferential interest rate of **3%** over and above the prevailing statutory base interest rate, and at the minimum the debit interest rate calculated by our bank.
- 5.6. Customers may be issued a refund only in the case of undisputed or legally established claims, or if defects are glaringly obvious. The customer has the right to compensation only in the case of undisputed or legally established claims.
- 5.7. In the event of an obvious decline in the financial position of the customer, we reserve the right to withdraw from this Agreement if, upon our request, the customer fails to effect a security deposit within an appropriate time period.

6. Warranty for defects

- 6.1. We are liable for defects and for the absence of warranted properties of goods inasmuch as we undertake to rectify the defective goods or to replace them with non-defective goods within an appropriate time span. **The choice between rectification of the defect and replacement delivery shall be retained by us.**
- 6.2. Our seller's warranties apply on the precondition that the customer, if deemed a merchant according to the German Commercial Code (HGB), has lodged a specific and detailed written complaint with us in consequence of visible defects in accordance with § 377 HGB within 10 days of receipt of the goods in question. Complaints pertaining to defects arising thereafter are to be similarly lodged within the same time period, calculated from the time at which they are apprehended.
- 6.3. We are bound by warranty only if the delivered goods are properly installed and put into operation in complete accordance with our instructions.
- 6.4. The customer has the right to withdraw from this Agreement or to request a reduction in prices if we are not prepared or if we are not in a position to correct the defects in question or – above all – if the correction of the defects extends beyond a reasonable time span for reasons occasioned by us.
- 6.5. We are liable for damages only in the event of intent and gross negligence as defined by legal regulations. Liability is limited to gross negligence and typically foreseeable damages, provided no basic contractual obligations are impacted, or bodily damages incurred.
- 6.6. The warranty period effective for claims and rights in respect of defects – irrespective of the legal basis upon which they arise – is one year from delivery.
- 6.7. In the event of bespoke orders, we reserve the right to over-deliver or under-deliver by up to 10%. Returns are explicitly disallowed.

7. Retention of proprietary rights

- 7.1. The delivered goods remain our property until complete payment has been effected. The goods may then be re-sold by the customer in accordance with routine business norms. The customer is, however, to assign to us in advance all claims raised against a buyer or against a third party for the respective invoiced amount arising from the re-sale. The customer is authorised to collect these claims even after their assignment. At our request, the customer is to provide details of the amount of the assigned claim and of the debtor, to provide all information necessary for collection, to submit all associated documents to us immediately and to issue written notice of the assignment to the debtor, notwithstanding our right to issue written notice of the assignment to the debtor ourselves.
- 7.2. The customer is not entitled to transfer delivered goods to a third party as security, nor to pawn them.
- 7.3. In the event that the customer violates the Terms of this Agreement – in particular by delaying payment, we are entitled to re-possess the goods without necessarily issuing notice.
- 7.4. The customer is to inform us immediately of any attachment and other interventions or claims.
- 7.5. If the goods are re-sold in conjunction with other goods that are not ours, the customer's claim against the buyer for the amount agreed between us and the customer as the delivery price is deemed assigned to us upon cessation of the Agreement.
- 7.6. In the event that goods delivered are damaged owing to faulty installation, the customer cedes the resulting claim for replacement to us.

8. Place of fulfillment – place of jurisdiction

- 8.1. Place of fulfillment for all obligations derived from this Agreement is Hamburg, provided the contractual partner is deemed a merchant according to the German Commercial Code (HGB).
- 8.2. The exclusive place of jurisdiction shall be Hamburg, provided the contractual partner is deemed a merchant according to the German Commercial Code (HGB).
- 8.3. German legislation is applicable to the Agreement between the contractual parties with the exception of the reference rules of Private International Law and the UN Convention on Contracts for the International Sale of Goods.

9. Data protection

We reserve the right to process customer data within the parameters of prevailing data protection laws.

10. Final clause

Should a clause within these Terms and Conditions of Delivery and Payment become ineffective, the validity of the remaining provisions is to remain unaffected.

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Imprint

KARL DOSE GMBH

Försterweg 73 - 77
22525 Hamburg
Deutschland / Germany

Phone: +49 (0)40 547322-0
Fax: +49 (0)40 547322-99
E-mail: sales@karl-dose.de
Website: www.karl-dose.com

Managing Directors:
Ullrich Dose, Detlef Rinne, Thorsten Marquardt

District Court of Hamburg
Commercial Register: HRB40225
VAT-No.: DE 118596146

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