

|||| LOPOLIGHT ||||

Ex/ATEX LIGHTS

ZONE 1

NAVIGATION LIGHTS

Ex

LOPOLIGHT
3 YEAR WARRANTY
LED LIGHT - 100W - 12VDC - 1000LM
IP68 - 100% WATERPROOF
CONNECTION - 100V/1A
00000000

LOPOLIGHT Ex NAV. LIGHTS

- WHY Explosion proof Navigation LIGHTS?
- ATEX/IEC Ex ZONE 1 AND 2

WHAT IS Ex-EQUIPMENT/AREAS?

- Ex-equipment are traditionally used in places like.
- The maritime industry is increasingly requesting Ex lights for

ZONES AND CATEGORIES

- ZONE 0,1 and 2

LABELLING/ CLASSIFICATION

- Light decals

Ex LIGHT CONSTRUCTION

- Classification and category

WHAT IS INCLUDED WITH A LOPOLIGHT Ex LIGHT

- Included in package
- NOT Included

WHAT IS Ex-EQUIPMENT/AREAS?

- Ex-equipment are traditionally used in places like:
- The maritime industry is increasingly requesting Ex lights for:

Ex LIGHTS PRODUCT RANGE

- Ex Light product range
- Accessories

ORDER EX LIGHTS FROM WEB-SHOP

TRAINING AND EDUCATION

- Installers and Integrators
- Ex lights NOW-HOW

Ex LIGHTS INFORMATION MATERIAL

- Ex light material to your disposal and download

Ex LIGHTS PRODUCT DATA

- Technical details.

INDEX



WHY EXPLOSION PROOF NAVIGATION LIGHTS?

The location of the Navigation lights onboard leaves little room for flexibility. It is important that your vessel is displaying the correct lights at the correct position demanded by the COLREGS – this enhances safety at sea by lowering the risk for misunderstandings.

The number of vessels with an ATEX/IEC Ex zone is increasing rapidly. Consider the growing fleet of LNG tankers and the associated infrastructure such as tugs, pilot boats and service vessels, or the hundreds of vessels in build now using LNG, Methanol, Ammonia, and others – all with ATEX/IEC Ex zones. And then we have all the oil rigs, with their signal lights.

All in need for no-compromise, rugged, fit 'n forget light solution.

APPROVED FOR BOTH ATEX/IEC Ex ZONE 1 AND 2

The Lopolight Professional Ex Series is formally approved for use in ATEX/IEC Ex equipment group II, Category 2, Zone 1 (and therefore also Zone 2).

The difference between the mentioned zones can be described like this: Zone 1 is an area that is classified 'as a place in which an Explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapours and mists is likely to occur occasionally during normal operation', whereas Zone 2 is an area that is classified 'as a place in which an Explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapours and mists is not likely to occur in normal operation but if it does occur, it will be present for a short period of time only'

THE LOPOLIGHT ATEX/IEC Ex SOLUTION

The Professional Ex Series lights are kept in the exact same form factor as the regular Professional Series, the difference is in the manufacturing; the use of ATEX/IEC Ex certified components such as connectors and cable glands. The marking is ATEX/IEC Ex specific and dedicated grounding point.

The full range of the Professional Series are available in the Ex configuration – including the ice-class lights!

The Ex Series lights are fully compatible with the Lopolight Navigation Light Control & Monitoring system.

LOPOLIGHT
Ex NAV. LIGHTS





WHAT IS EX-EQUIPMENT/AREAS?

Ex-equipment is traditionally used in places like:

- The chemical industry
- Oil refineries
- Off shore installations (platforms)
- Filling stations
- Tunnels/ sewers/ drains
- Milling industry / printing-house
/ painting industry
- Farmer's installations
- Mining industry

The maritime industry is increasingly requesting Ex lights for:

- LNG transports
- Gas/oil terminals operations such as
tugs, pilot boats and service vessels
- Alternative fueled vessels (using methanol,
hydrogen or ammonia)

Ex LIGHT CLASSIFICATIONS(ATEX)



Classification by group and category according to intended use.

Area	Category of Equipment to ATEX Definitions	Presence or Duration of Explosive Atmosphere	Level of Protection. Faults to Allow for	Comparison with Present Practice
Equipment Group II (surface industry)	1	Continuous presence (Inside the tank)	<u>Very high level of protection:</u> 2 types of protection, or 2 independent faults	<u>Group II</u> Zone 0 (gas)
	2	Likely to occur (Close proximity to vents and valves)	<u>High level of protection:</u> 1 type of protection Habitual frequent malfunction	<u>Group II</u> Zone 1 (gas)
	3	Unlikely to occur. Present for a short period	<u>Normal protection:</u> Required level of protection	<u>Group II</u> Zone 2 (gas)

LOPOLIGHT Ex LIGHTS APPROVED TO:

COLREG72, MED (Wheelmark), UL1104,
DNV, ABS, ATEX/IEC Ex equipment
group II, Category 2, Zone 1.

Standards: ISO/IEC 80079-34:2020, IEC
60079-18:2015, IEC 60079-7:2015



Inflammable substances for all 3 Categories can be Gas, Vapours, Mist, or Dust.

Maximum surface temperature of equipment - taking the maximum Ambient temperature into account	T1 450 °C	T2 300 °C	T3 200 °C	T4 135 °C	T5 100 °C	T6 85 °C
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Temperature classes and protection principles



TRAINING AND EDUCATION

WEBINAR

We will host webinars specifically tailored to installers and integrators. This webinar will present the product offering and the specific installation aspects of Ex lights.

Ex LIGHT KNOW-HOW

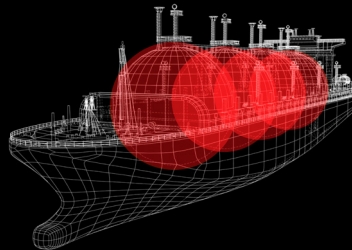
The Lopolight Team has received training in the products, the requirements – and most importantly: In which zones can the Lopolight Ex navigations lights be used.





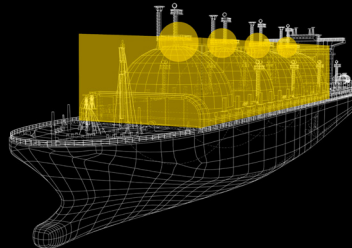
ZONES AND CATEGORIES

The difference between the mentioned zones can be described like this:



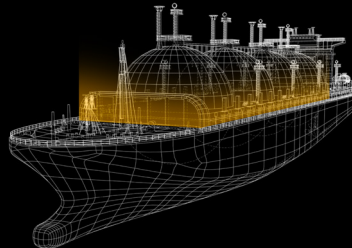
ZONE 0 - mark for category 1

Zone 0 classifications for gases, vapours and mists are directly relevant to oil and gas platforms, drilling rigs and storage facilities



ZONE 1 - mark for category 2

Zone 1 is an area that is classified 'as a place in which an Explosive atmosphere consisting of a mixture with air or flammable substances in the form of gas, vapours and mists is likely to occur occasionally during normal operation'.



ZONE 2 - mark for category 3

Zone 2 is a hazardous area classified as an atmosphere where a mixture of air and flammable substances in the form of gas, vapour or mist is not likely to occur in normal operation, but if it does occur, will persist for a short period only.

THE LOPOLIGHT ATEX/EX NAVIGATION LIGHTS CAN BE USED IN THESE ZONES!

LABELLING/ CLASSIFICATION



[Ex]

Explosion protected

[mb]

Encapsulation zone 1

[eb]

Increased safety

[IIB]


Gas group marking

[T5]

Max surface temp
100 °C

[Gb]

Equipment protection
level

LOPOLIGHT
Humblebaek, Denmark
CE 2804  II 2G
DAN 22ATEX0205X + IECEx CNEEx 23.0011X
Ex mb eb IIB T5 Gb

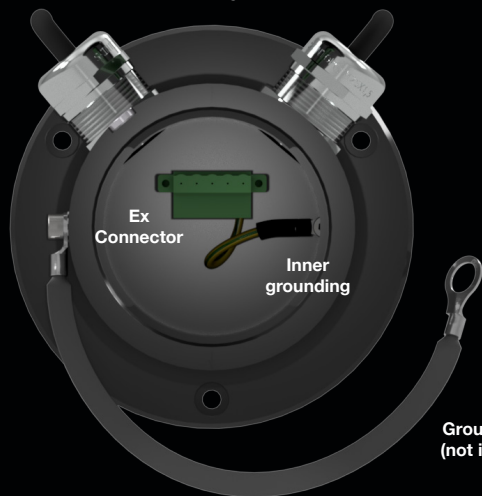


Ex LIGHTS CONSTRUCTION

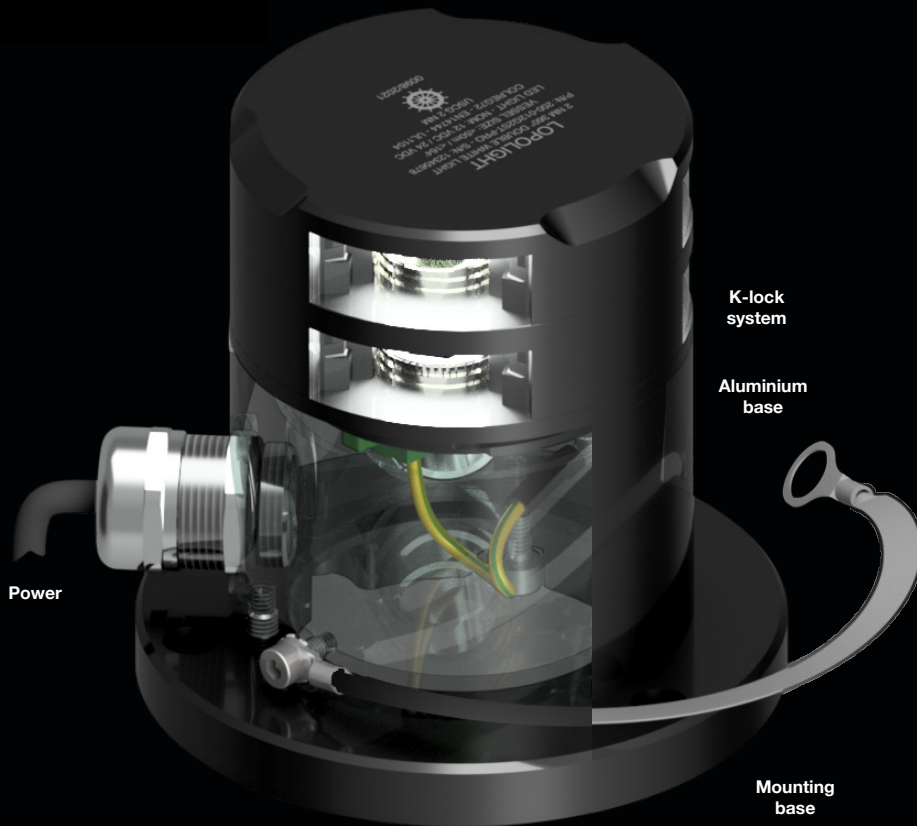
TECHNICAL DETAILS.

Design, dimensions and quality as the Lopolight Professional series navigation lights: Hard coat anodized aluminium housings, PMMA optics, fully encapsulated, all certified to ATEX/IEC Ex

Prepared for
2 x M25 x 1,5
Ex cable glands



Ex mark
on decals

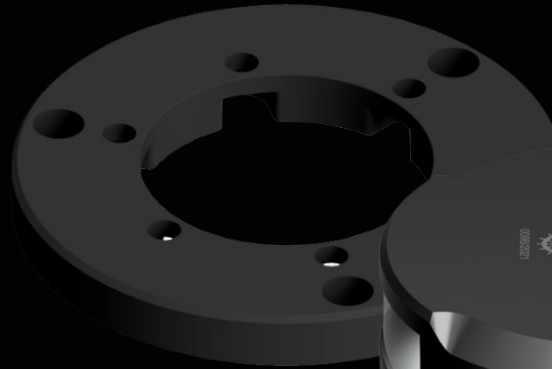


INCLUDED WITH A
LOPOLIGHT Ex LIGHT?



INCLUDED IN PACKAGE

- 1 Navigation light
- 1 pcs. Ex connector
- 1 bag with 3 mounting screws
- 1 pcs. HDPE mounting baseplate



NOT INCLUDED (SEE ACCESSORIES)

- Cable glands
- Ground strap





Ex LIGHTS PRODUCT RANGE



RANGE				
	UNDER 50 METERS		OVER 50 METERS	
	Regular temperature range	Ice-class	Regular temperature range	Ice-class
Starboard sidelight, double	301-008ST-PRO-Ex	301-008ST-PRO-I-Ex	301-108ST-PRO-Ex	301-108ST-PRO-I-Ex
Port sidelight, double	301-009ST-PRO-Ex	301-009ST-PRO-I-Ex	301-109ST-PRO-Ex	301-109ST-PRO-I-Ex
Stern light, double	301-005ST-PRO-Ex	301-005ST-PRO-I-Ex	301-105ST-PRO-Ex	301-105ST-PRO-I-Ex
Masthead, double	300-038-PRO-Ex	300-038-PRO-I-Ex	300-138-PRO-Ex	300-138-PRO-I-Ex
Towing stern, double	201-013ST-PRO-Ex	201-013ST-PRO-I-Ex	301-113ST-PRO-Ex	301-113ST-PRO-I-Ex
360° White, double	200-012G2ST-PRO-Ex	200-012G2ST-PRO-I-Ex	300-112G2ST-PRO-Ex	300-112G2ST-PRO-I-Ex
360° White, single	200-012G2-PRO-Ex	200-012G2-PRO-I-Ex	300-112G2-PRO-Ex	300-112G2-PRO-I-Ex
360° Red, double	200-014G2ST-PRO-Ex	200-014G2ST-PRO-I-Ex	300-114G2ST-PRO-Ex	300-114G2ST-PRO-I-Ex
360° Red, single	200-014G2-PRO-Ex	200-014G2-PRO-I-Ex	300-114G2-PRO-Ex	300-114G2-PRO-I-Ex

ACCESSORIES			
P/N	Description	Cable diameter (mm)	Cable diameter (in)
601-384	Gland, Skintop MS-M 25x1.5, ATEX/IEC Ex	9,0-17,0 mm	3.5 - 6.7
601-383	Gland, Skintop MS-M 20x1.5, ATEX/IEC Ex	7,0-13,0 mm	2.8 - 5.1
601-385	Gland, Skintop MS-M 16x1.5, ATEX/IEC Ex	4,5-10,0 mm	1.8 - 3.9
601-390	Gland, Skintop MS-M 12x1.5, ATEX/IEC Ex	3,0-7,0 mm	1.2 - 2.7
601-389	Reduction, Skindicht MR-M25/M20, ATEX/IEC Ex		
601-391	Reduction, Skindicht MR-M20/M16, ATEX/IEC Ex		
601-392	Reduction, Skindicht MR-M16/M12, ATEX/IEC Ex		
601-387	Blanking cap, Skindicht MS-M 25x1.5, ATEX/IEC Ex		
400-304	Grounding strap kit, 250mm, 6mm ² mesh wire, Incl. M5 bolt and washer, Ø5mm ring terminal at light end - Ø8mm ring terminal at ships end		

ORDER Ex LIGHTS
FROM WEB-SHOP



2nm 360° White, Double, black, Ex Zone 1&2

P/N: 201-012ST-PRO-EX

2nm 360° White, Double, black EX Zone 1&2

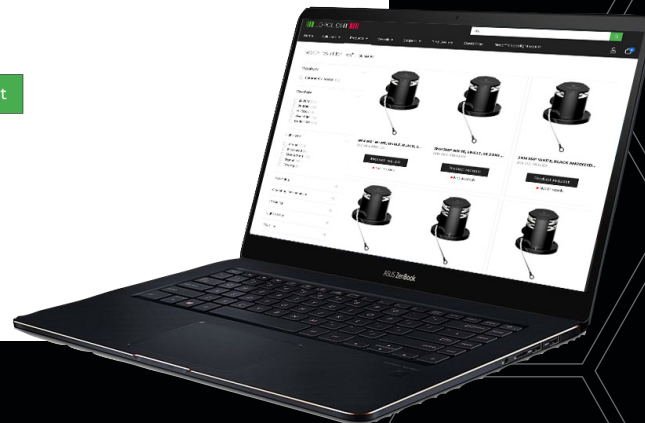
Certified for use in ATEX Zone 1 & 2
Horizontally mounted on 400-037-B alu base (IP68)
Cable direction side
incl. HDPE base plate

Special Product

 Add to cart

Add to draft

● Not in stock



INFORMATION
MATERIAL



**Power
point**

**Product
samples**

**A5
brochure**

A4 Flyer

**Webinar
/Training**

Catalogue

**Direct
mail**

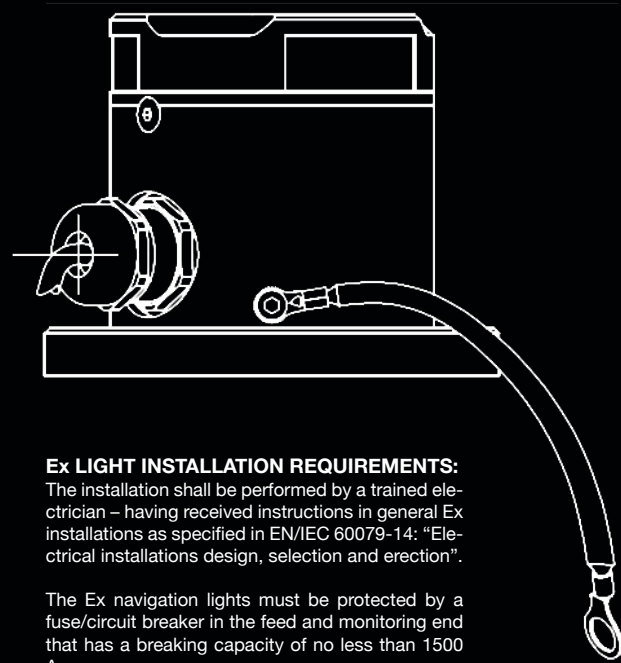
Website

**Press
Releases**

We've compiled extensive resources to assist you in obtaining the essential information you need. Visit lopolight.com to access and download files pertaining to our Ex navigation lights.



INSTALLATION GUIDE



Ex LIGHT INSTALLATION REQUIREMENTS:

The installation shall be performed by a trained electrician – having received instructions in general Ex installations as specified in EN/IEC 60079-14: “Electrical installations design, selection and erection”.

The Ex navigation lights must be protected by a fuse/circuit breaker in the feed and monitoring end that has a breaking capacity of no less than 1500 Ampere.

The Standard Lopolight NLC is protected by circuit breakers type “Schneider Acti9 C-char, 6/10kA”, and thereby suitable for adequate protection of all lights in the Lopolight Ex program.

WARRANTY:



- This product is covered by our 5-year limited warranty.
- If you need to claim a warranty for your product, please fill in the form at www.lopolight.com/warranty, under the Warranty tab.
- Quick access by the QR code



Ex PRODUCTS MARK:

All Lopolight Ex products have the following marking plate:



Special conditions for safe use:
Warning – do not open when energized
Warning – do not separate when energized

APPROVALS:



The light in this package is type approved to the following standards:

- EN-14744, UL-1104, COLREG72, IEC 60945

Recognized by the following authorities:

- IMO, MED (EU-wheelmark), USCG



INTERNATIONAL
MARITIME
ORGANIZATION

All Lopolight Ex products mark:



www.lopolight.com/certificates



Specified Ambient temperature area: T_{amb} :
-25°C to +55°C



Ex approvals:

- EN IEC 60079-0:2018, EN 60079-7:2014, EN 60079-18:2014, ATEX 2014/34/EU

MOUNTING: CHECK & ENSURE PROCESS

1) Check that the Lopolight product is marked for Ex installation.

2) Prepare the installation site by ensuring the fastening holes/conversion plates, bases etc. are ready for the physical mounting.



3) Check that the power-supply cables are disconnected from any power-source at the feed-end. (Typically, Lopolight NLC system mounted in wheelhouse)



4) Check that the place for the physical installation of the navigation light is classified for Class 1, Zone 1 or Zone 2 Ex equipment.



5) Check that the cable gland(s) are rated with no less than demanded for the zone in question. Lopolight M-20 (P/N: 601-383) & M-25 (P/N: 601-384) are rated for zone 1 installations – if using other cable glands, it is recommended to use “Ex e” certified glands.

6) Ensure that suitable cable is used, and that the diameter suits the chosen cable gland.

7) Ensure that the **External ground** connection is bolted on to the superstructure via a “clean-metal” point. Protect the connection point accordingly to prevent rusting etc. with paint or other accepted coating.

8) Ensure that the **internal ground** connection (between the navigation light and the Lopolight base) is firmly bolted. (DIN-912, M4 stainless bolt used. Torque: ~2.7Nm)

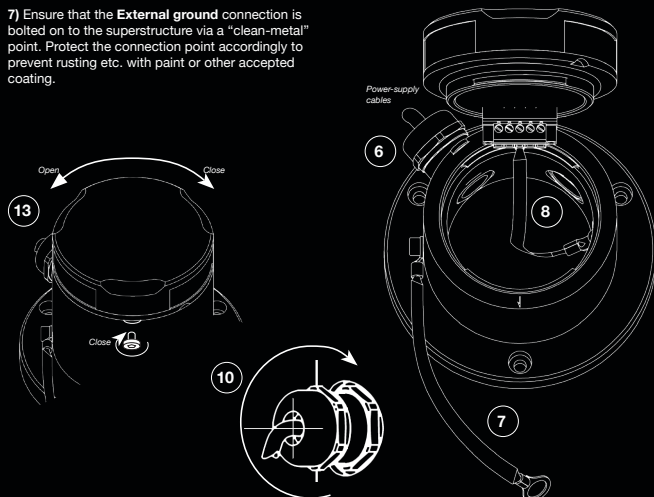
9) Remove the outer sheet to a suitable length (some 120mm) and strip the wires to a length that suits the ferrules (strand protection tube).

10) Mount the cable in the cable gland and tighten this properly.

11) Mount the wires in the green internal cable connector at the indicated positions (pay attention to polarity and primary/secondary channel). Tighten the terminal screws to 2 Nm.

12) Mount the cable-connector in the navigation light connector and ensure that the retaining screws are tightened accordingly.

13) Mount the light in the K-lock base and make sure the locking screw is mounted properly.



CONNECTING POWER:

Supply Voltage: 12- and 24-Volt systems

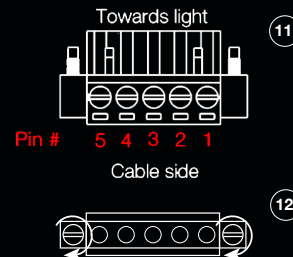
Single light:

Pin 1: Positive (+)	Pin 4: Not used
Pin 2: Negative (-)	Pin 5: Not used
Pin 3: Grounding	-

Double light:

Primary light:	Secondary light:
Pin 1: Positive (+)	Pin 4: Positive (+)
Pin 2: Negative (-)	Pin 5: Negative (-)
Pin 3: Grounding	Pin 3: Grounding

Recommended fuse or circuit breaker:
Less than 2A (slow).



Recommended fuse or circuit breaker: Less than 2A (slow).

MAINTENANCE:



Cleaning your product:

• Wipe off your product with a normal detergent, on a damp cloth.
DO NOT use alcohol or thinner for cleaning your light – this could damage the lens.



Troubleshooting:

If the light does not function:

• Check that you have a supply Voltage between 10 and 32 Volt DC.
• Check that the polarity is right (you will not damage the Lopolight by accidentally wiring the polarity wrong).



End of life signaling:

Your Lopolight product has a advanced time function inside that ensures that the light has required intensity over a 50.000-hour projected lifetime. The light will signal to you when it is getting to the end of its useful life. The following signals can be observed:

- **All OK:** 5 seconds after turning on the light it will go dark for 0,1 second and turn on again. This is just a check for you to assure that the microprocessor is working.
- **Less than 2000 working hours left:** The dark period is Extended to 2 seconds: you should change the light at your nExt service within the nExt 12 months.
- **Light Expired:** The dark period is Extended to 5 seconds: You should change the light im mediately. (The light will still be working, even in the Expired state)



SALES AND SUPPORT

LOPOLIGHT AROUND THE WORLD

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