

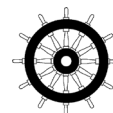
NAVIGATION LIGHTS

TEF 2870 Ex NAVIGATION LIGHT

ZONE 2 & SAFE AREA

USER MANUAL

Subject to change without prior notice TUM4834 REV. M 04.04.2024



IMPORTANT

Read this instruction carefully before installing the product

WARNING!



DO NOT OPEN, MAINTAIN OR SERVICE IN AN AREA WHERE AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.

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SAFETY PRECAUTIONS

Note that changes made to the product and/or installation of components which do not conform to the manufacturer's specification, may be a safety violation. The manufacturer will in no circumstance be held responsible for such activity. For your health and safety, always use safety gear suited for the task. Be certain to follow codes, regulations and/or specific procedures that are related to the installation.

INTRODUCTION

Thank you for purchasing this product!
For installation, maintenance and assurance of a long life of this product, please follow this manual.

CONTENT IN BOX

The product is fully assembled, and ready for installation.

SAFETY PRECAUTIONS

Note that changes made to the product and/or installation of components which do not conform to the approval, may be a safety violation. The manufacturer will in no circumstance be held responsible for such activity. For your health and safety, always use safety gear suited for the task. Be certain to follow codes, regulations and/or specific procedures that are related to the installation.

IMPORTANT INFORMATION

The navigation lights are supplied with galvanic isolators. These should be placed between the navigation light and the wall, thus preventing corrosion to either. There should be used acid resistant stainless steel fixing screws/bolts. Never paint navigation light or any of its components. Use only spare parts as described.

TOOLS REQUIRED

Regular tools required for installation.

- Wrench(es) suitable for selected M10 bolts for fixing navigation light to mast / ships structure.
- Flat screwdriver for opening junction box.
- 27mm wrench for installing of cable gland.
- Small flat screwdriver for terminating wires.

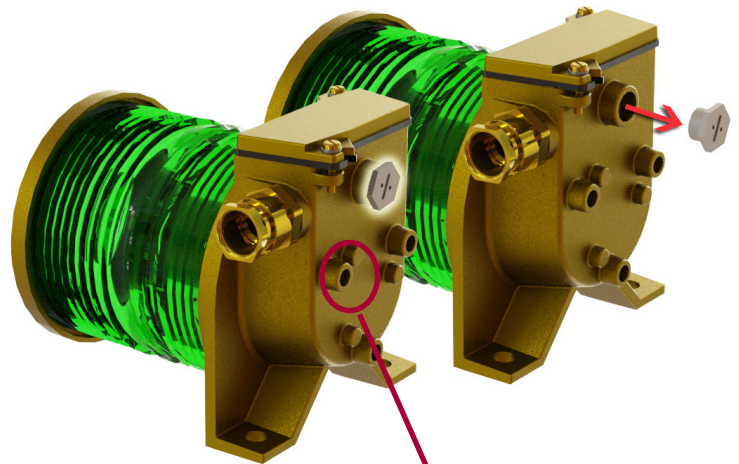
MAINTENANCE INSTRUCTIONS

Gasket for junction box shall be replaced at intervals of one year. (Part No. 5003 0164). Gasket shall be of same type as original. One replacement gasket is included in shipment.

The navigation light should be inspected according to Company routines. The manufacturer suggests regular check for water intrusion / condensation which should be removed immediately. When cleaning, use only mild detergents. Alcohol or petroleum based products may damage lens, paint or plastic components.

At intervals according to company routines, the restricted breathing properties should be verified. Remove stopping plug at test port (PG9). See illustration below.

Connect pressure meter / vacuum pump and conduct test according to IEC 60079-15(2010) 23.2.3.2.1.1. Note: PG9 gland for connection of Ø3.5-8mm hose is included in shipment. Note: According to approval, test of restricted breathing properties is not required.



Point for connecting bonding wire

INSTALLATION INSTRUCTIONS

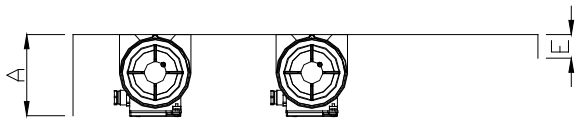
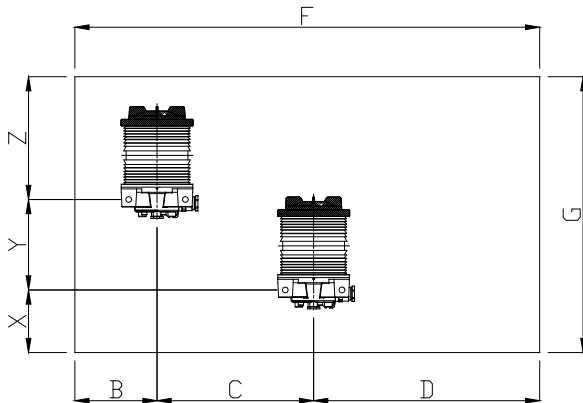
The navigation light should be installed according to IMO regulations and other relevant rules and regulations for electrical installations onboard ships.

Consider the difference in material between the navigation light (seawater resistant brass) and the wall/mast it is to be installed on. Use galvanic isolators whenever there is a risk of corrosion.

- Fix navigation light to mast / ships structure using 2x M10 bolts (not supplied). Use acid resistant screws/bolts. Tight firmly, max. 25 Nm.
- Open junction box, install and secure electrical cable. The cable must be clamped near up to the navigation light according to relevant rules and regulations for electrical installations onboard ships.
- Connect electrical wires. Max. 2.5mm². Strip length 8mm. Tightening force 0.6-0.8nm. Connect ground wire to M5 earth screw in junction box.
- Screw on junction box lid. Max. tightening force: 5 Nm. Make sure that gasket is centered and covering the whole perimeter.
- External bonding conductor. Connect bonding wire to point shown in illustration above. M8 screw.

For mounting and screening of side navigation lights, see illustration next page.

SCREENING DATA FOR SIDE



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NOTE:

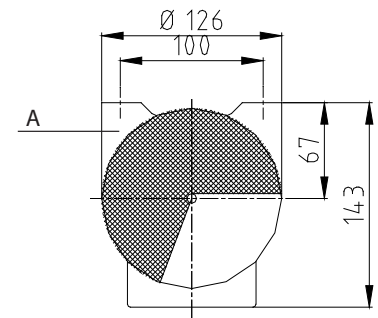
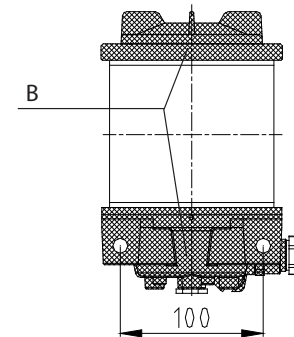
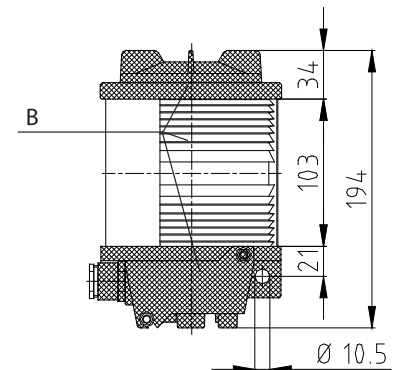
All measurements in millimeters
 All tolerances +/-1mm
 Minimum measurements indicated by an asterisk (*)

Formula:

| | A | B | C* | D | E | F* | G* | X* | Y* | Z* |
|----------|--------|------------|-----|------------|----------------|-----|-----|----|-----|-----|
| TEF 2870 | $<B*2$ | ≥ 200 | 175 | $\geq Cx2$ | $67-(0,026xD)$ | 700 | 465 | 55 | 200 | 210 |

Recommended practical measurements:

| | A | B | C* | D | E | F* | G* | X* | Y* | Z* |
|----------|-----|-----|-----|-----|----|-----|-----|----|-----|-----|
| TEF 2870 | 400 | 200 | 175 | 350 | 58 | 700 | 465 | 55 | 200 | 210 |



280A4966

LAMP REPLACEMENT



WARNING - DO NOT OPEN, MAINTAIN OR SERVICE IN AN AREA WHERE AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.

Use a 19mm wrench to screw off lid. Twist off lamp and replace. Screw lid back on. Tightening force: 5 Nm.


Recommended mounting method of double tier navigation lights.



SPARE PARTS

| Description | Part No. |
|--|-----------|
| Light source, P28S 24V 40W | 9400 049 |
| Light source, P28S 230V 65W | 9400 052 |
| Mounting bracket for 1" pipe | 0000 2600 |
| Mounting bracket for 2" pipe | 0000 2440 |
| Lamp holder P28S | 5088 0019 |
| Gasket, junction box | 5003 0164 |
| O-ring, top lid | 5000 0051 |
| Cable gland M20 M20 Ø9,0 - 14,3mm | 6222 010 |
| Gland PG9 Ø3.5-8mm for restricted breathing test | 5656 |

TECHNICAL DATA

| | |
|------------------------|---|
| Material: | Brass, lens of through coloured glass |
| Input voltage: | According to installed light bulb. Max. 230V. |
| Light source: | 40W for 24V versions. 65W for 115/230V versions. |
| Lamp base: | P28S |
| Power consumption: | 40-65 Watt |
| Ingress protection: | IP66 |
| Cable gland: | M20 Ø9,0 - 14,3mm |
| Area of use: | Ex zone 2 and safe area. |
| Ex classification: |  I3G Ex nR IIC Gc T5 |
| Operating temperature: | -52°C to +50°C |
| Certificate No. | EU type examination MEDB000025U (DNV) EU Quality System MEDD000006D (DNV) PRESAFE 14 ATEX 5436X IECEX PRE 14.0055X Special conditions: Resistance to impact is tested with reduced values, according to EN 60079-0 26.4.2, "low risk of mechanical damage". |
| Compliance standards: | COLREG 72 as amended, Annex I/14, IMO Res A.694(17), IMO Res MSC.253(83) EN IEC 60079-0:2018, EN 60079-15:2010, IEC60079-0:2017 Ed. 7.0, IEC 60079-15:2010 Ed. 4.0 |