



Navigation Light

TEF 2882

**Document properties (TUM7225)**

Revision	Comment	Revision date	Approved
0	First issue	21.01.2022	CS
A	Connection for Duplex with single entry	08.06.2022	CS

# Installation and operating manual

---

## Contents

Document properties (TUM7225) .....	1
Warnings and risk levels.....	3
General information .....	3
Marking and intended use .....	4
Technical data .....	4
Product description.....	4
Transport and storage .....	4
Mounting and installation.....	5
Mounting .....	5
Positioning of lights .....	6
Electrical connections .....	6
Options and spare parts .....	8
Disposal.....	8
Compliance/Conformity .....	9
Appendix #1.....	10

## Warnings and risk levels

### DANGER

Non-compliance with the instruction results in risk of severe or fatal injuries to persons

### WARNING

Non-compliance with the instruction may result in risk of severe or fatal injuries to persons

### CAUTION

Non-compliance with the instruction may result in risk of injuries or damage to equipment

### NOTICE

Non-compliance with the instruction may result in reduced lifetime of equipment, malfunctions etc.

## General information

Before installation, make sure to read and understand this installation and operating manual.

Observe national assembly and installation regulations.

Always contact the manufacturer if anything is unclear, or if you notice any faults on the product or in this document.

This installation and operating manual shall be available to anyone operating, installing, inspecting, modifying or repairing the equipment.

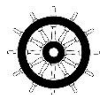
### Content in box

- The TEF2882 navigation light – powered by K2W
- Cable termination nut. One pc for simplex models and two pcs for duplex models (except duplex models with single cable entry)
- Installation instructions.
- Product certificate (K2W)

## Marking and intended use

### CAUTION

Not intended for use in "these" conditions (Where mud may be present, on helidecks, underground, direct sunlight, heavy vibrations, high risk of impact, harsh cleaning agents, high pressure washer etc.)



K2W – No.:0098

## Technical data

### Property

<b>Material</b>	Seawater resistant aluminium, borosilicate glass and stainless steel base.	
<b>Voltage</b>	24V DC (21 – 36 V DC)	
<b>Power</b>	Max. 10W (Dependent on model)	
<b>Electrical connection</b>	Wire cross section: 1.0 to 2.5mm <sup>2</sup>	Cable diameter: Ø9-16mm
<b>Working hours</b>	100,000 h (Each light source)	
<b>Operating temperature</b>	-40°C to +55°C	
<b>Ingress protection</b>	IP 66/67	
<b>Dimensions</b>	Simplex models: 140 x 140 x 139 mm (Excluding cable entry)	Duplex models: 140 x 140 x 139 mm (Excluding cable entry)
<b>Net weight</b>	Simplex model: max 1,66 kg	Duplex model: max 1.75 kg

## Product description

No maintenance is obtained through a simplified plug and play, modular design for ease of installation, and unmatched availability self-monitoring capabilities.

## Application

- Observe national and class society assembly and installation regulations.
- Observe national safety and accident prevention regulations.
- Navigation light as stated in product type approval.
- Signal light required by various national and canal authorities as stated in product type approval.
- General signal light.

## Transport and storage

- Transport and store the equipment only in the original packaging
- Store the equipment in a dry and vibration free place
- Do not drop!

## Mounting and installation

### DANGER

Incorrect mounting and installation may lead to risk for falling objects, risk for electric shock or fire and risk for equipment malfunction. In turn, this can lead to severe damage and/or injuries.

### Mounting

See figure 1 & 2.

### Fixing

The navigation light shall be fixed to a plane horizontal surface, by 4x M8 bolts. Maximum torque: 8 Nm. Ref. figure 2 & figure 3.

### Cable entries

Direction of cable entries; see figure 1. Ensure enough space to route cable and terminate cable properly. Minimum space requirement: Cables bending radius + 50 mm.

Figure 1 (view from top)

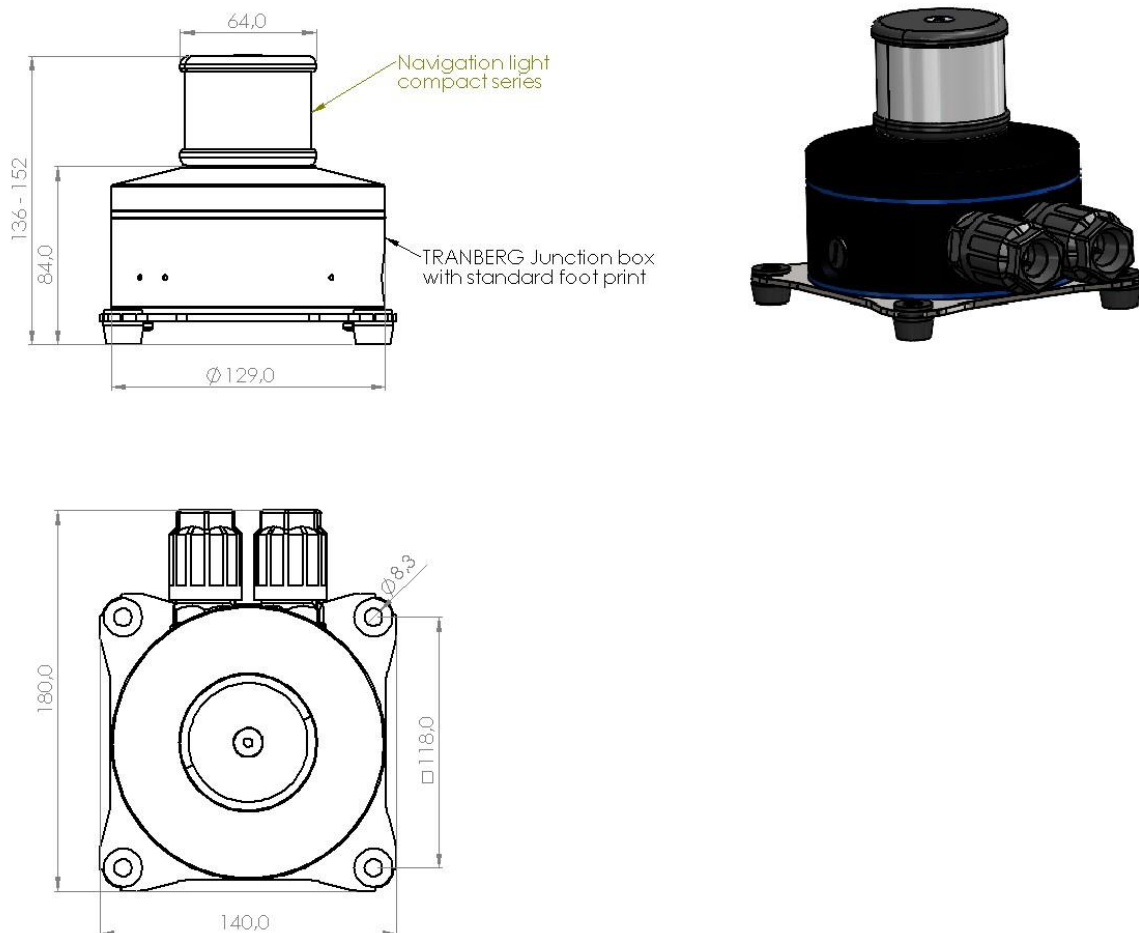
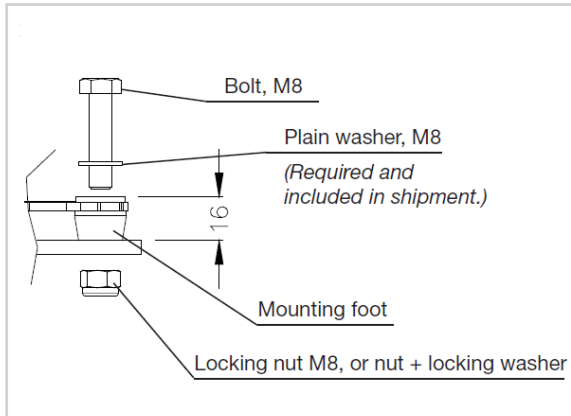


Figure 2



## Positioning of lights

Inboard screen is not required as the light itself fulfill the requirements. If an inboard screen is installed please follow the following procedure:

Ref. COLREG 72, Annex I.

## Electrical connections

Only qualified electrical personnel may install and start up the QPD components. For correct electrical termination please follow the Phoenix user manual, Appendix 1 in the end of this user manual. Below is an excerpt of the Phoenix user manual describing the main points of the procedure? Please note that the dust caps mounted on lights connector sockets are not IP rated and will not protect against water intrusion.

### Cable termination

Cable diameter: Ø9-16 mm.

Part # 2882xxx delivered as standard with terminal nut for Ø9-16 mm cable.

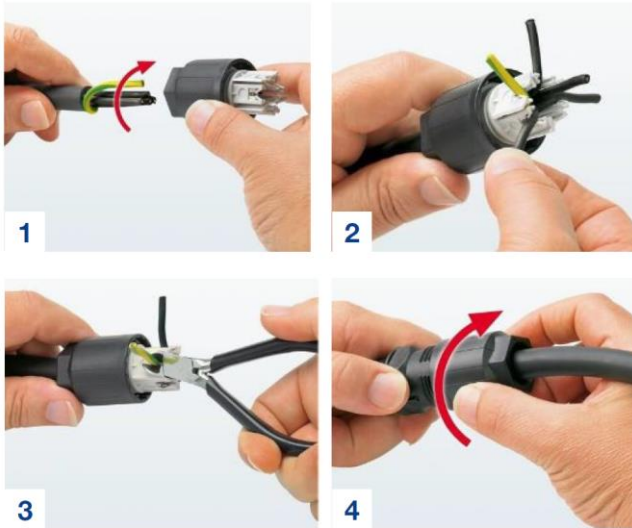
Wire cross section: 1.0 mm<sup>2</sup> to 2.5 mm<sup>2</sup>.

Wire diameter incl. insulation: 2.0 mm to 3.80mm.

### Connections

1. Strip approx. 60 mm off the cable.
2. Loop the PE conductor around the live conductors (1). As a result, the PE conductor will be pulled out of the terminal block last if strong tension is exerted on the cable.
3. Insert the cable into the terminal nut.
4. Fix the wires in the conductor support of the splice body (2).
5. Cut off the wires with a diagonal cutter flush on the splice body (3).
6. When connecting the terminal nut to the light connector socket, make sure that their markings are aligned.

7. Screw the terminal nut together with the light connector socket (4). For this, we recommend using either the socket wrench, a wrench, or a plier. Screw the terminal nut as far as it will go, or with the specified torque. It must not be possible to unscrew the terminal nut again by hand.
8. Seal off any non-allocated connections using a protective cap.



Photos courtesy of Phoenix Contact GmbH.

Terminal #	
1	+24V
2	0V*
3	+24V*
N	0V
PE	Protective earth

**Note:** In order to obtain proper EMI, PE wire should always be terminated.

**\* Only for Duplex Nav. Light with single entry! For all other Navigation Lights are these terminals not used!**

## Options and spare parts

Image	Description	Part No
	Cable termination nut Ø6 -11 mm	50500223
	Cable termination nut Ø9-16 mm	50091435
	Plug connector for cable Ø6 - 11 mm	-
	Plug connector for cable Ø9-16 mm	Digital output (Alarm output)
	Protective cap for unused cable entries IP68	50500226
	Breather plug M12 IP68	50091434
	Blind plug M25	50091436
	Standoff feet M8, set of 4 pcs	7247
	Mounting adapter to 155 x 155 mm M10 hole pattern	6694

## Disposal

### CAUTION

This equipment or part of this equipment is considered EE-Waste, and shall be handled accordingly

- Observe national and local regulations and statutory regulations regarding disposal
- Separate materials when sending it for recycling
- Ensure environmentally friendly disposal of all components
- No component or packaging shall end up in the ocean during any stage of the product's lifetime



## Compliance/Conformity

- IEC 60945 Cl. 4.5.3 “Compass safe distance” waived according to EN 14744 Cl. 4.8.8 “No magnetic materials”
- IEC 60945 Cl. 8.8 “Rain and spray” omitted according to EN 14744 Cl. 5.3.6 “Covered by IP67”
- EN 60529:2013 – IP66/67
- MEDB000038Y (K2W)
- MEDD000019S (K2W)

# Appendix #1

**PHOENIX CONTACT** PHOENIX CONTACT GmbH & Co. KG  
 Flachmarktstraße 8, 32825 Blomberg, Germany  
 Fax +49-(0)5235-341200, Phone +49-(0)5235-300

phoenixcontact.com MNR 0139827 - 04 2018-06-06

DE Einbauanweisung für den Elektroinstallateur  
 EN Installation notes for electricians  
 FR Instructions d'installation pour l'électricien  
 IT Istruzioni di installazione per l'elettricista  
 ES Instrucciones de montaje para el instalador eléctrico

QPD...1,5...  
 QPD...2,5...  
 QPD...6,0...









Technical data	QPD...1,5...	QPD...2,5...	QPD...6,0...
Rated voltage (III/3)		690 V	
Rated current (QPD W M20 FC = 15 A)	17,5 A	20 A	40 A
Contact resistance		< 3 mΩ	
Housing material		PA	
Contact material		CuZn	
Flammability rating according to UL 94		V0	
Degree of protection		IP66, IP68 (24 h / 2 m), IP69K	
Ambient temperature (operation)		-40 °C ... 100 °C	
Temperature while connecting cable		-5 °C ... 50 °C	
<b>QUICKON connection</b>		√	
Wire insulation material: PVC, PE, TPE, rubber			
Wire diameter incl. insulation	1,60 ... 3,00 mm	2,00 ... 3,60 mm	2,95 ... 5,00 mm
Stripping length	60 mm		
Litz wire structure / smallest wire diameter	VDE 0295 Class 1...6 / min. 0,15 mm		
Frequency of connections	10		
Conductor cross section (solid/stranded)	0,5 ... 1,5 mm <sup>2</sup>	1 ... 2,5 mm <sup>2</sup>	2,5 ... 6,0 mm <sup>2</sup>
AWG conductor cross section	AWG 20 ... 16	AWG 16 ... 14	AWG 14 ... 10
Tightening torque (QUICKON nut)	8 Nm	10 Nm	15 Nm
Loosening torque (QUICKON nut)		> 5 Nm	