



## Installation Manual

### TRANBERG® LED Luminaire

#### TEF2785 LED Luminaire

#### BlueLine Series

#### Document properties (TUM7328)

Revision	Comment	Revision date	Approved
0	First issue	22.07.2022	CS
A	Added more info ++	20.03.2023	CKR
B	Renamed to LED Luminaire	13.04.2023	TBH
C	Added part numbers for spare parts	24.01.2024	CS

# Installation and operating manual

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## 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.

## Safety

- To ensure that the product is used safely and to optimize its life time, the following instructions must be observed and adhered to.
- Only suitably qualified personnel may install the products.
- Note that changes to the product and/ or installation of components which do not conform to the approval, may be a safety violation. The manufacturer will not under any circumstances 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.
- The equipment shall be attached to a solid surface in a way suitable for the conditions of use.
- The lamp is sealed for life. Never open the sealed parts of the lighting fixtures.
- Do not use chemicals or caustic substances of any kind when cleaning.

### WARNING



Do not stare at the operating light source

## 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.)



## Technical data

Property	
Material	Seawater resistant aluminum, borosilicate glass and stainless steel base.
Voltage	110-240VAC ; 24V DC
Power	Max. 15W
Electrical connection	Wire cross section: 1.0 to 2.5mm <sup>2</sup> Cable diameter: Ø9-16mm
Working hours	>50000 h
Operating temperature	-30°C to +45°C
Ingress protection	IP 66/67
Light output	>1500lm
Light color	2200K; 4000K; 5000K; blue; red; green
CRI	>80
Power efficiency	>120 lm/W
Light distribution	120° FWHM (wide)
Dimensions	Simplex models: 140 x 140 x 85 mm (Excluding cable entry)
Net weight	max 1,53 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.

### Content in box

- The TEF2785 LED Luminaire
- Cable termination nut(s).
  - 1 pc for model with single cable entry.
  - 2 pcs for models with 2 cable entries (through wiring)
- Installation instructions.
- Product certificate

## Application

- Observe national and class society assembly and installation regulations.
- Observe national safety and accident prevention regulations.
- General lighting
- Outdoor deck areas
- Machine room
- Life boat areas
- Gangway and stairs
- Working areas
- Indoor lighting - where a higher IP grade is needed
- Signal lighting

## 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.

### CAUTION



Luminaires not suitable for covering with thermally insulating material

## Mounting

See figure 1 & 2.

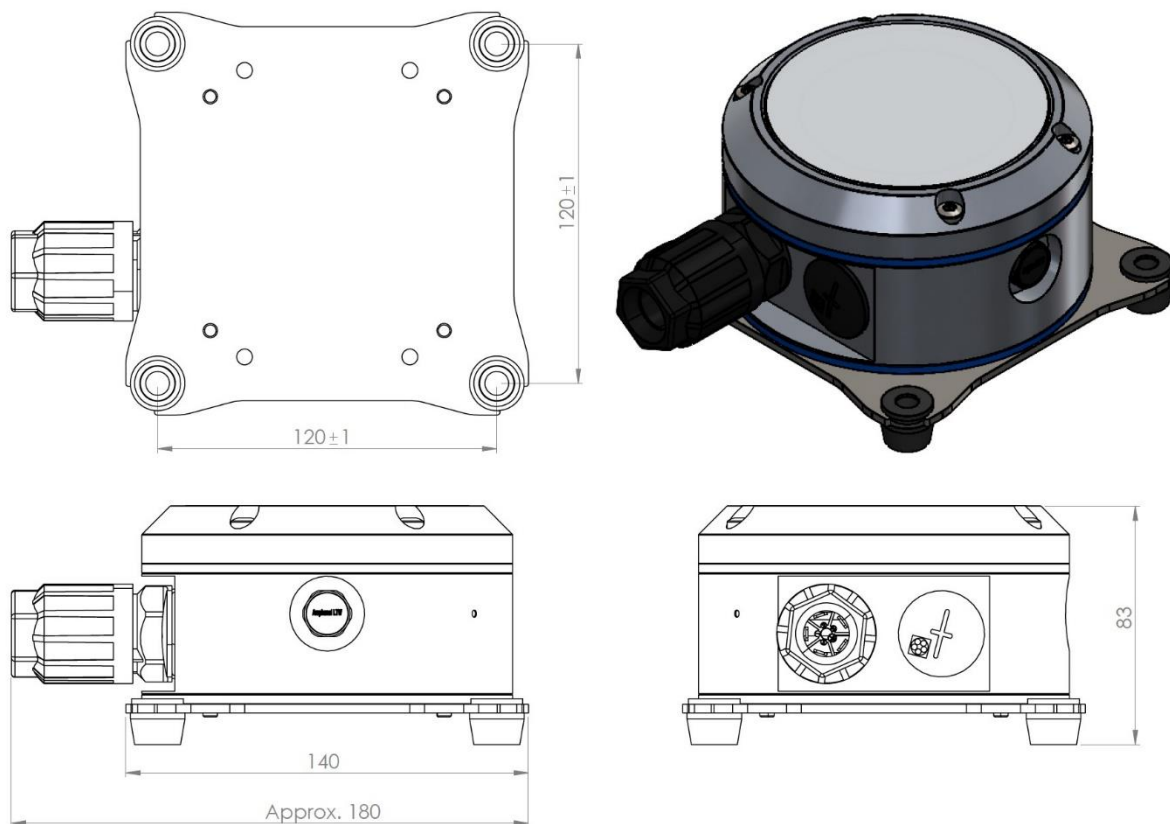
### Fixing

The luminaire shall be fixed to a plane 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



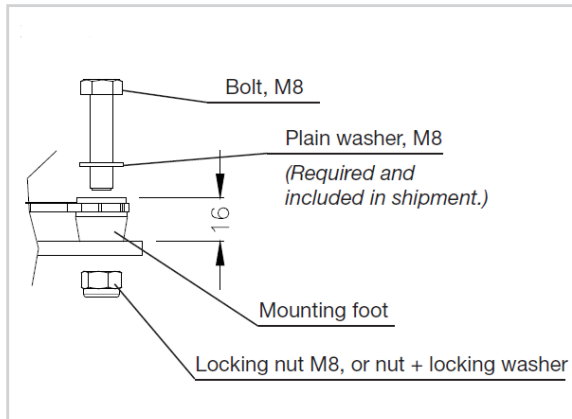


Figure 2

## Electrical connections

### CAUTION

The max. number of luminaires on one circuit breaker is 10 lamps (circuit breaker of type B) or 20 lamps (circuit breaker of type C) at 230VAC

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.

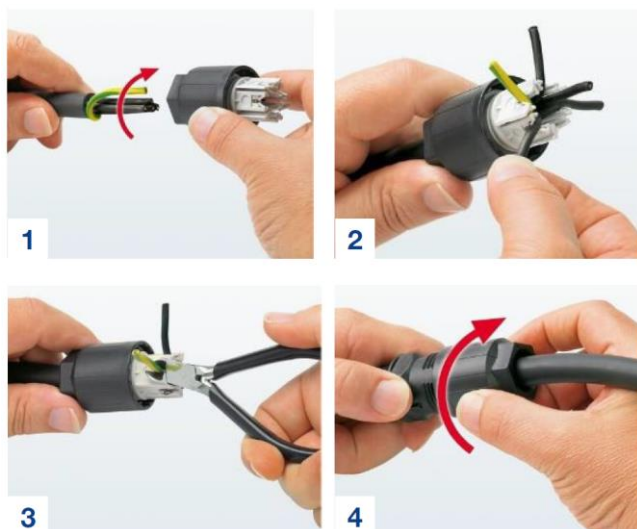
Part # 2785xxxx delivered as standard with terminal nut for Ø9-16 mm cable.

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.

### 110 – 240 VDC Version

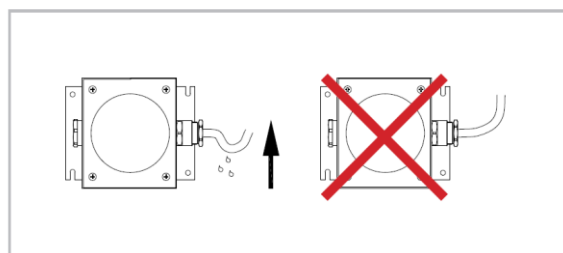
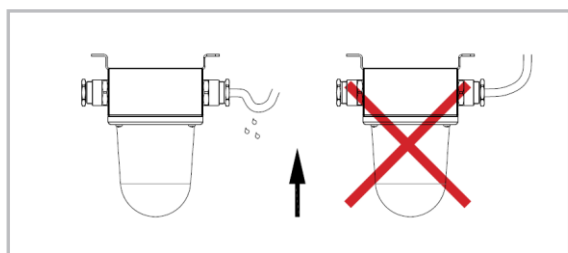
Terminal #	
1	L
2	
3	
N	N
PE	Protective earth

### 24VAC Version

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

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

**Note:** Be sure to install cable in a way which prevents water to penetrate into the enclosure through the connection plug, also make sure to use the correct QPD Plug connector size (according to the cable diameter) when you install the luminaire.





## 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	50500224
	Plug connector for cable Ø9-16 mm	50500225
	Protective cap for unused cable entries IP68 (Option,must be ordered separately)	50500226
	Sealing plug 14x22 RD (delivered with the lamp)	50500231
	Blind plug M25	50091436
	Standoff feet M8, set of 4 pcs	7247
	Mounting adapter to 155 x 155 mm M10 hole pattern	6694

## Maintenance and cleaning

The luminaire should be inspected according to company routines.

- Do not clean the fixtures with a high-pressure steam or water jet. This could cause damage that is not covered by the warranty. Only clean by washing down with cloths / soft brushes, water and mild detergents. Avoid chemicals with high or low pH, abrasives, high pressure washer, strong detergents, solvents, petroleum- or alcohol based cleaning agents and similar. Avoid any corrosive media.
- This is a sealed product safe for water intrusion if it is not used pressure steam or water jet directly on the lamp. The manufacturer still suggest regular check for water intrusion in the housing.
- When cleaning, use only mild detergents. Alcohol or petroleum based products may damage the sealing.

## 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

Add EU Declaration of Conformity document

## Appendix #1

**PHOENIX CONTACT** PHOENIX CONTACT GmbH & Co. KG  
Flachmarkstraße 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			
Rated voltage (III/3)			
Rated current (QPD W M20 FC = 15 A)			
Contact resistance			
Housing material			
Contact material			
Flammability rating according to UL 94			
Degree of protection			
Ambient temperature (operation)			
Temperature while connecting cable			
<b>QUICKON connection</b>			
Wire insulation material: PVC, PE, TPE, rubber			
Wire diameter incl. insulation			
Stripping length			
Litz wire structure / smallest wire diameter			
Frequency of connections			
Conductor cross section (solid/stranded)			
AWG conductor cross section			
Tightening torque (QUICKON nut)			
Loosening torque (QUICKON nut)			

QPD...1,5...	QPD...2,5...	QPD...6,0...
17,5 A	20 A	40 A
690 V		
< 3 mΩ		
PA		
CuZn		
V0		
IP66, IP68 (24 h / 2 m), IP69K		
-40 °C ... 100 °C		
-5 °C ... 50 °C		
✓		
1,60 ... 3,00 mm	2,00 ... 3,60 mm	2,95 ... 5,00 mm
60 mm		
VDE 0295 Class 1...6 / min. 0,15 mm		
10		
0,5 ... 1,5 mm <sup>2</sup>	1 ... 2,5 mm <sup>2</sup>	2,5 ... 6,0 mm <sup>2</sup>
AWG 20 ... 16	AWG 16 ... 14	AWG 14 ... 10
8 Nm	10 Nm	15 Nm
> 5 Nm		

# EU Declaration of Conformity

EU-Konformitätserklärung

Déclaration de Conformité UE



TRANBERG

**R. Stahl Tranberg AS • Strandsvingen 6 • 4032 Stavanger • Norway**

declares in its sole responsibility, erklärt in alleiniger Verantwortung, déclare sous sa seule responsabilité,

that the product: dass das Produkt: que le produit:	Small Decklight
Type(s), Typ(en), type(s):	TEF 2785 "BlueLine" LED Luminaire

is in conformity with the requirements of the following directives and standards.

mit den Anforderungen der folgenden Richtlinien und Normen übereinstimmt.

est conforme aux exigences des directives et des normes suivantes.

Directive(s) / Richtlinie(n) / Directive(s)	Standard(s) / Norm(en) / Norme(s)
2014/35/EU: Low Voltage Directive 2014/35/EU Niederspannungsrichtlinie 2014/35/UE: Directive Basse Tension	EN 60529: 1991/AC:2016-12 - IP66/67 EN 62471:2008 - Photobiological safety of lamps and lamp systems EN 60598-1:2021 - Luminaires Part 1: General requirements and tests EN60598-2-1:2021 - Luminaires – Part 2-1: Particular requirements – Fixed general purpose luminaires
2014/30/EU EMC Directive 2014/30/EU EMV-Richtlinie 2014/30/UE Directive CEM	EN IEC 55015:2019/A11:2020
2011/65/EU RoHS Directive 2011/65/EU RoHS-Richtlinie 2011/65/UE Directive RoHS	EN IEC 63000:2018

The technical documentation for this equipment is retained at the following address

Die technische Dokumentation für dieses Gerät wird unter folgender Adresse aufbewahrt

La documentation technique de cet équipement est conservée à l'adresse suivante

R. Stahl Tranberg AS,  
Strandsvingen 6,  
4032 Stavanger,  
Norway.

Stavanger, 19.06.2023

Place and date

Ort und Datum

Morten R. Eie  
R&D Manager

Tor Arne Appfjell  
Certification / Ex resp.