



## Installation Manual

### TRANBERG® DECKLIGHT

#### TEF2780 LED Decklight

#### BlueLine Series

#### Document properties (TUM6911)

Revision	Comment	Date	Approved
Rev J	Changed to word version, added details on cable installation	02.11.2022	CKR
REV K	Added note on kit	29.11.2022	CKR
REV L	Added more info under technical data	02.12.2022	CKR

# 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

This lamp is a sealed for life product. Never attempt to open the lamphousing or any of the sealed parts of the lighting fixture. Do not attempt to unscrew the screws on the sides of the lamphousing.

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## Marking and intended use



## Technical data

Property	Value	Value
Material	Extruded seawater resistant aluminium, powder coated, glass	
Input voltage	100-240V AC	
Light output	2200K (2200 lm) 3000K (2500 lm) & 4000K (5000 lm)	
Power consumption	Approx. 25W & 50W (power consumption blue light approx.. 30W)	
Ingress protection	IP66	IP67
Weight 25W	3,2 kg	
Weight 50W	4,7 kg	
Mounting	Several mounting options available, adjustable distance	
Cable entries	2x Phoenix QPD quick installation plugs for cables up to 2,5mm <sup>2</sup>	
Surge protection	1 kV line-to-line	
Operating temperature	-30°C...+55°C	
Light distribution	Ultrawide, Wide and Medium	
Light source	LED	
Lifetime	Load 80% > 120 000h	

## Product description

Decklight for area lighting on ships such as walkways, car-decks, engine rooms, cargo areas etc. It is sealed for life and should not be opened under any circumstances.

## 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!

## Tools required for installation

Regular tools required for installation:

Tools for mounting the mounting bracket to the surface of the wall: 4 pcs M8 hex screws, 4 pcs M8 plain washer, 4 pcs M8 spring lock washers & 4 pcs M8 nuts. Hex wrench size 6.0 for tightening the screws and nuts.

Tools for mounting the bracket to the lamp Torx screwdriver for M5 screws.

## 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.

### Preparation

- Make sure you read the whole manual before starting the installation.
- Check whether the fixture is to be installed in an environment that meets the ambient temperatures.
- Remove the fixture from the package and check it for mechanical damage.
- Ensure that the surface where the fixtures are to be mounted on is flat.

Only qualified personnel are allowed to perform installation and maintenance tasks to this product. The equipment is ready for installation when leaving the production facilities of R. Stahl Tranberg AS. Please check the condition of the equipment and any other contents in the box when unpacking. Any damage done to the equipment during transportation is not the responsibility of R. Stahl Tranberg AS. If the content is not complete, please file a claim to the manufacturer immediately.

The TEF 2780 is delivered with two adjustable mounting brackets. The distance between the two brackets can be adjusted to desired location. The standard bracket delivered with the lamp is the cranked bracket. As options we have the types shown in the chapter options and spare parts in this manual.

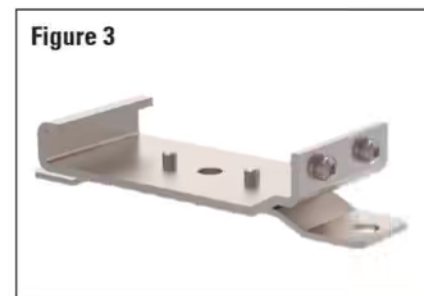
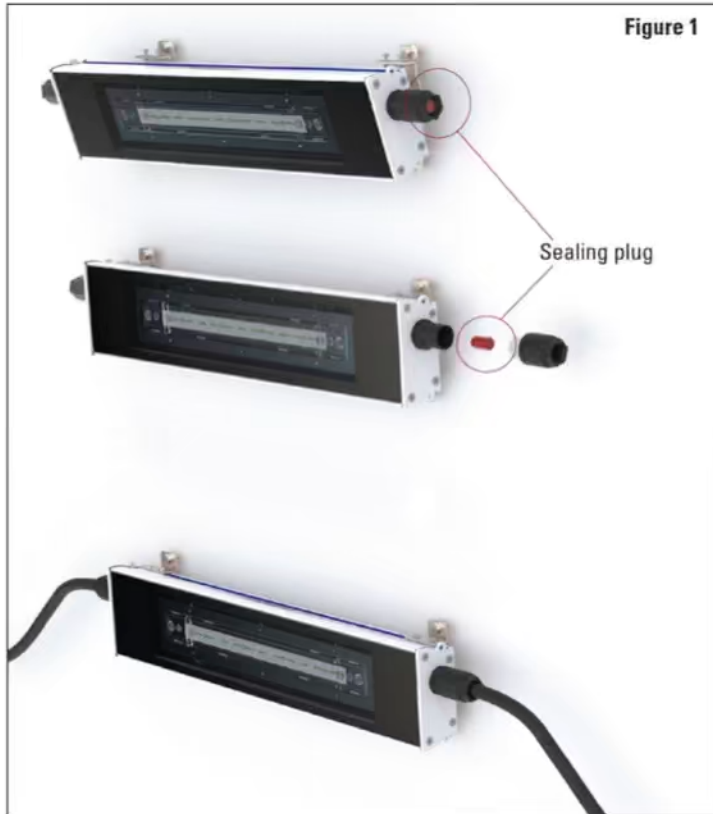
Any damage caused by the use of an incorrect combination of cable and cable glands is not the responsibility of R. Stahl Tranberg AS and is not covered by the warranty.

### Mounting

If the lamps are not electrical connected at the installation time, make sure that the QPD plug are properly sealed by a sealing plug (or a protective cap) for unused cable entries IP68 (part no 50500231). **See figure 1 on next page.** If this is not done the lamp will not be protected against water intrusion. The lamp comes with a sealing plug installed.

When the lamp is ready for electrical connection remove the sealing plug and connect the cable to the QPD plug. After properly mounting of the cable and the plug, the deck light has an IP66/67.

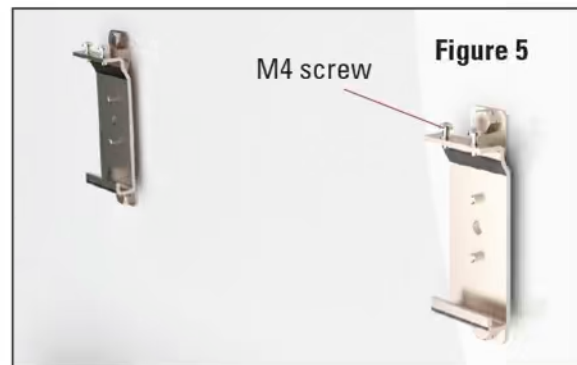
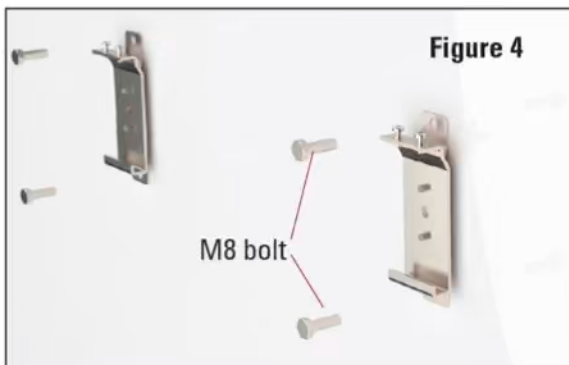
The mounting brackets is already assemble at R. Stahl Tranberg factory and packed inside the box with the luminaire. **See figure 2 & 3 on next page.**



**WARNING**

Seal off any non-allocated connections using a sealing plug or a protective cap.

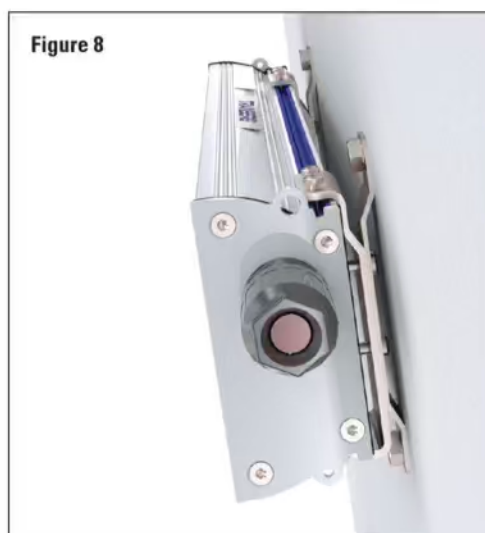
Place the pair of mounting brackets on the surface it should be mounted on. The distance between the two brackets is adjustable. The brackets should be mounted with 2 pcs M8 bolts for each bracket. **See figure 4 & 5.**



Make sure the 4 pcs M4 screws on top of the mounting brackets is unscrewed to allow the lamp housing to slip in underneath. Place the lamp housing inside the mounting bracket. The mounting brackets should fit into the blue groove on the lamp housing. **See figure 7 & 8.**

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After placing the lamp in the correct position be sure to tighten the 4 pcs M4 screws on the top to secure the lamp from falling. **See figure 6 & 8.**





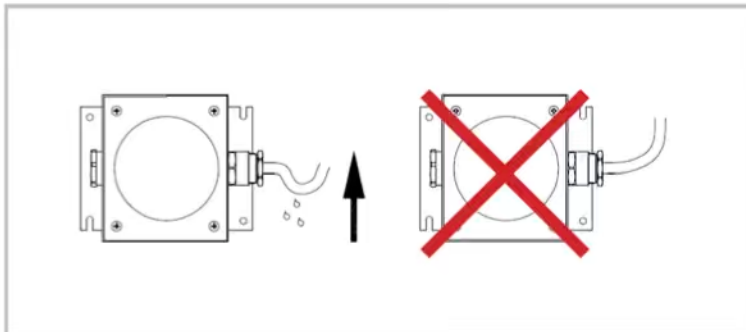
## Electrical connections

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 document. Below is an excerpt of the Phoenix user manual describing the main points of the procedure.

### **Important!**

*Be sure to install the cable in a way, which prevents water to penetrate into the enclosure through the connection plug. Always let the cable bend downwards from the cable gland to prevent water to sip in with the cable. See illustration below. The illustration is showing another type of lamp, but the principle is the same.*

*Also make sure to use the correct QPD Plug connector size (according to the cable diameter) when you install the luminaire.*



### **Cable termination**

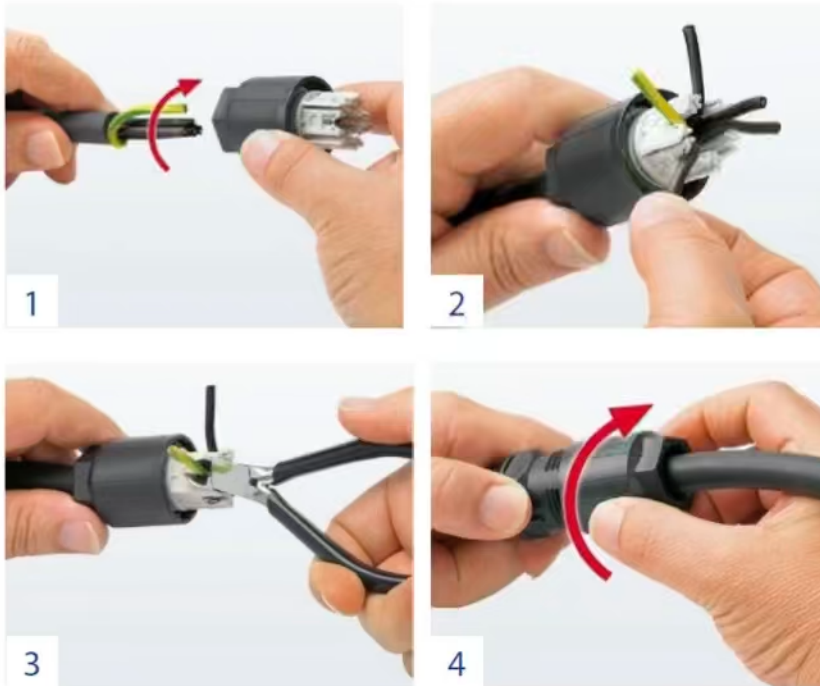
- Cable diameter: Ø9-16mm
- Wire cross section: 1.0mm<sup>2</sup> to 2.5mm<sup>2</sup>.
- Wire diameter incl. insulation: 2.0mm to 3.80mm.

### **Connections**

1. Strip approx. 60mm 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 goes, or with the specified torque. It must not be possible to unscrew the terminal again by hand.
8. **Seal off any non-allocated connections using a protective cap or a sealing plug.**

### **Ground bounding screw**

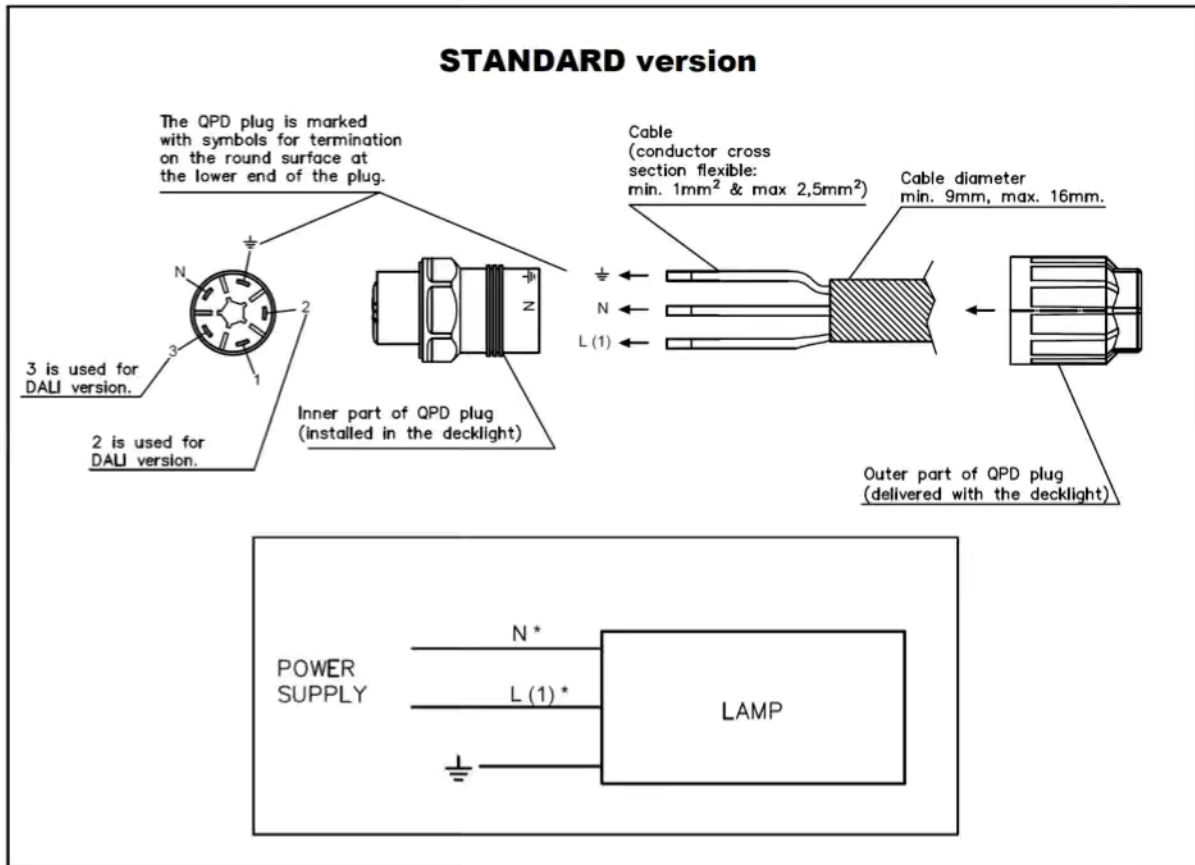
The decklight is equipped with a Ø4,2 hole in each end. This can be used as grounding where national or company regulations require it.

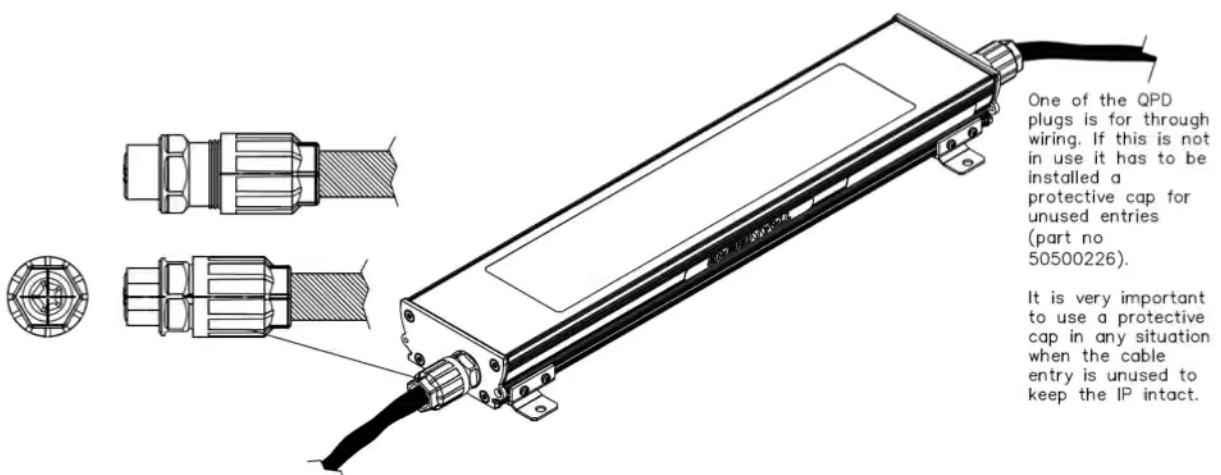
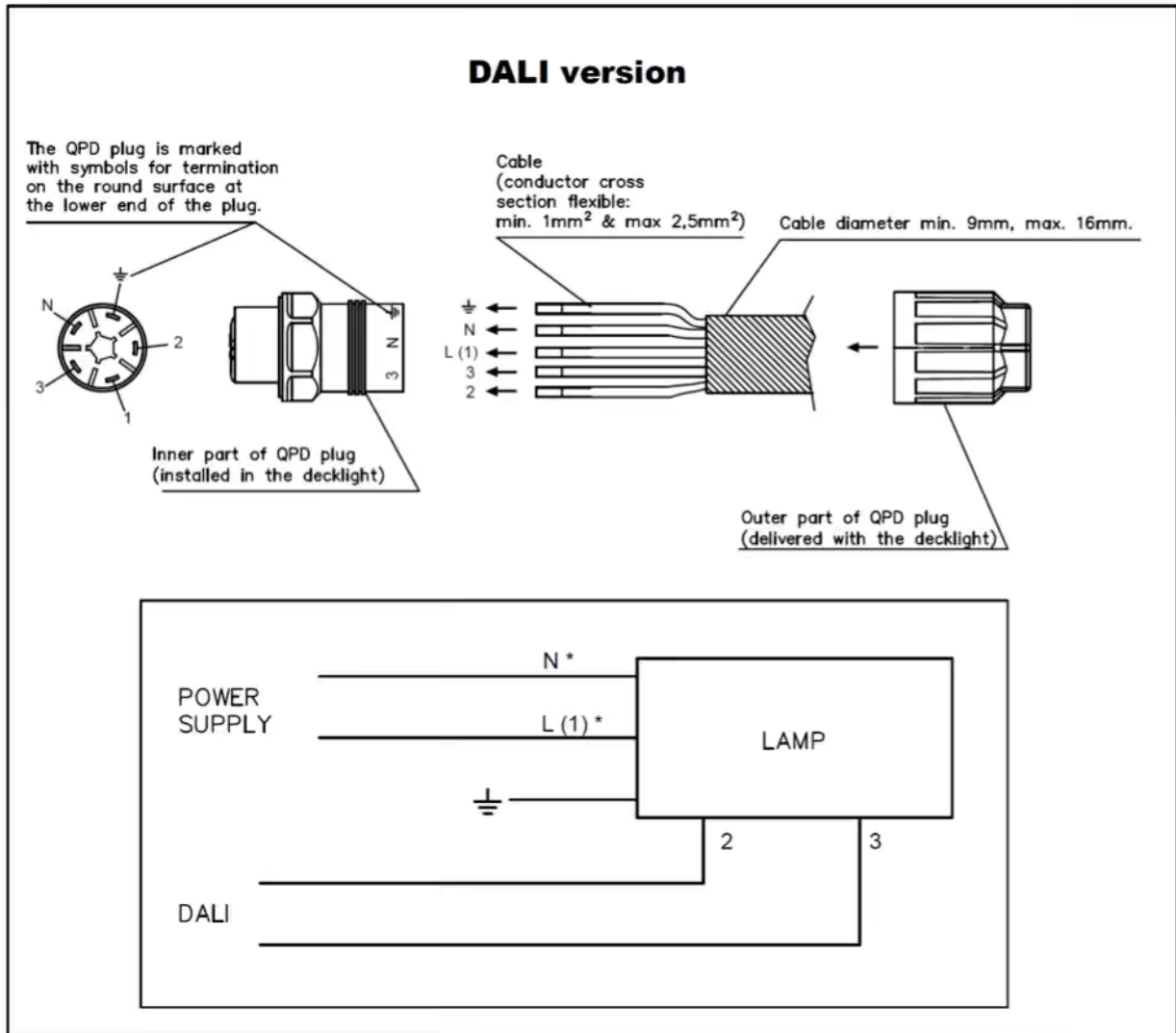


Photos courtesy of Phoenix Contact GmbH.

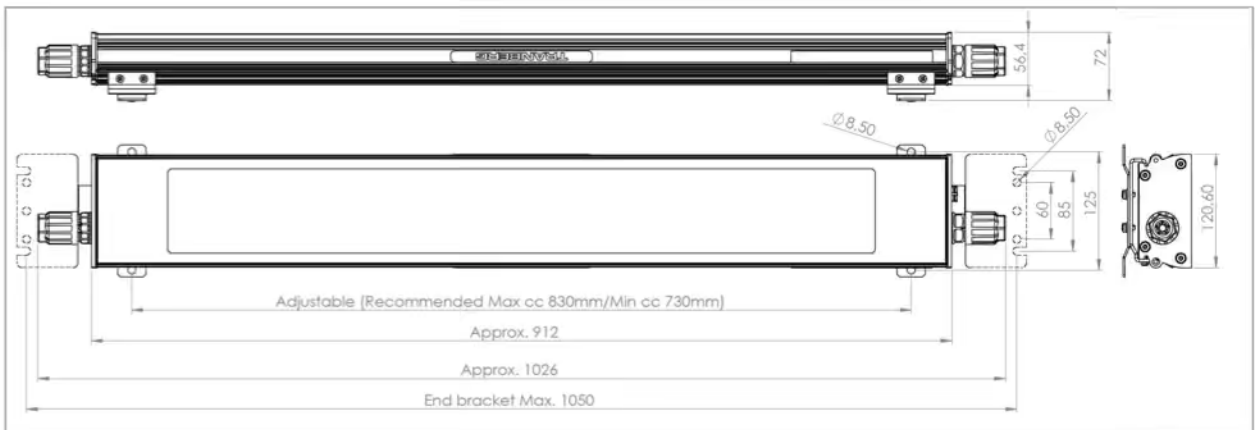
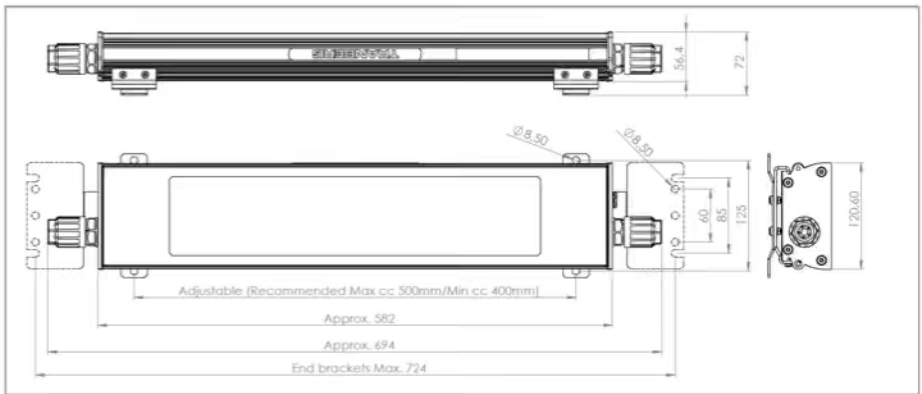
### QPD plug information (for more details see Phoenix QPD original datasheet)

Wrench size, union nut	27 mm
Tightening torque, union nut	10 Nm
Tightening torque, counter nut	5 Nm
Wrench size, counter nut	30 mm
Numbers of connections	10
Conductor cross section flexible min.	1 mm <sup>2</sup>
Conductor cross section flexible max.	2,5 mm <sup>2</sup>
Conductor cross section solid min.	1 mm <sup>2</sup>
Conductor cross section solid max.	2,5 mm <sup>2</sup>
Conductor cross section AWG min.	16
Conductor cross section AWG max.	14
Dimensions of slip-on connection	4.8x0.8 mm
External cable diameter	9 mm ... 16 mm
Position marking	1, 2, 3, N, PE
Quickon connectability	Max 10
Insertion/ withdrawal cycles	Max 50

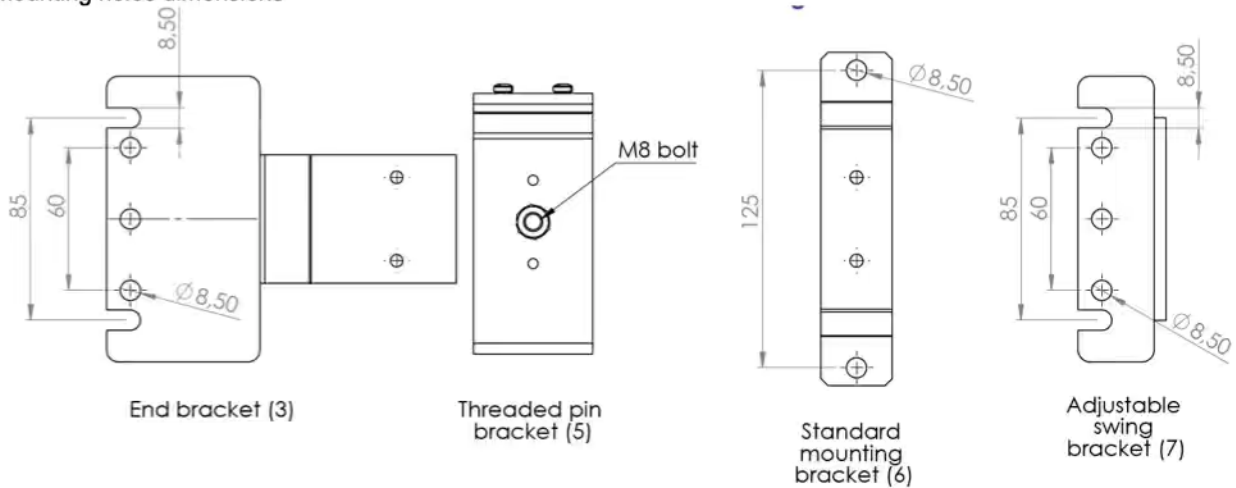




## Dimensions



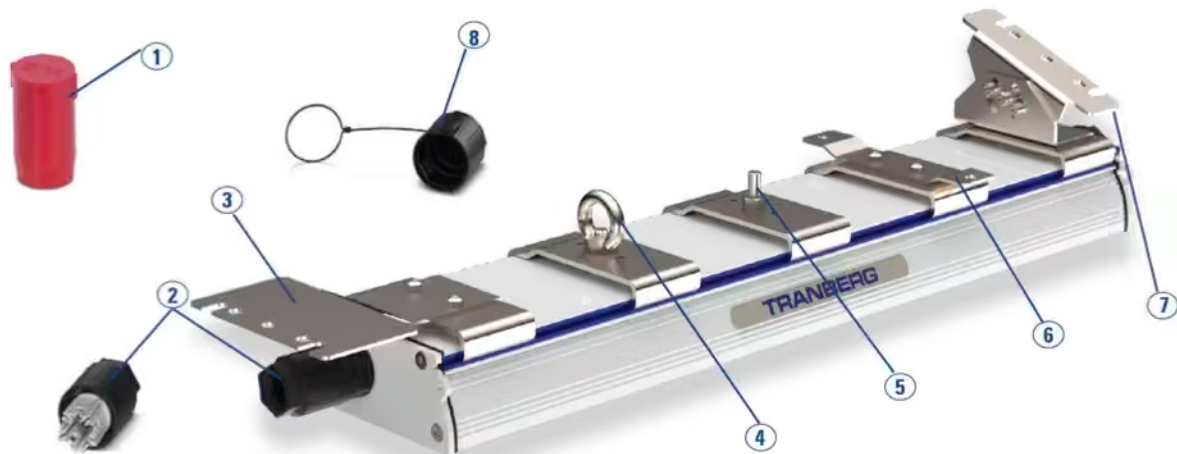
## Mounting holes dimensions



## Options and spare parts

No.	QPD	Part No.
1	Sealing plug 14x22 RD (delivered with the lamp)	50500231
2	Cable termination nut Ø9-16mm	50091435
3	Option mounting bracket kit, end bracket *	7329
4	Option mounting bracket kit, eye nut bracket *	7330
5	Option mounting bracket kit, threaded pin bracket *	7331
6	Standard mounting bracket kit, cranked bracket (delivered as standard with the lamp)*	7327
7	Option mounting bracket kit, adjustable swing bracket *	7334
8	Protective cap for unused cable entries IP68 (option, must be ordered separately)	50500226

\* All mounting bracket kits are delivered with 1 bracket in each package.  
For a complete set for one decklight it has to be ordered 2 pcs.



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**Standard mounting bracket: Cranked bracket, part no: 7327**

Base bracket for mounting to the lamp housing. Used in all versions.

ITEM NO.	DESCRIPTION	PartNo	QTY.
1	Base mounting bracket	7326	1
2	Standard mounting bracket	7283	1
3	Screw M5x10, A4-70 ISO 14583Torx	51010036	2
4	Spring lock washer M5	51512001	2
5	Screw M4x12 TORX ISO 14583	51016016	2

**Option mounting bracket: End bracket, part no: 7329**

ITEM NO.	DESCRIPTION	PartNo	QTY.
1	Base mounting bracket	7326	1
2	Mounting bracket part 2, end bracket option	7328	1
3	Screw M5x10, A4-70 ISO 14583Torx	51010036	2
4	Spring lock washer M5	51512001	2
5	Screw M4x12 TORX ISO 14583	51016016	2

**Option mounting bracket: Eye nut bracket, part no: 7330**

Add Loctite on threads

ITEM NO.	DESCRIPTION	PartNo	QTY.
1	Mounting bracket base	7326	1
2	Lifting eye nut M8	51714004	1
3	Screw M8x16 Torx ISO 14583	51016023	1
4	Loctite 243	50080053	1
5	Screw M4x12 TORX ISO 14583	51016016	2

**Option mounting bracket: Threaded pin bracket, part no: 7331**

A set of 2 pcs brackets is included in this part no.

ITEM NO.	DESCRIPTION	PartNo	QTY.
1	Mounting bracket with threaded pin	7481	1
2	Nut M8	51714002	1
3	Spring lock washer M8	51514001	1
4	Screw M4x12 TORX ISO 14583	51016016	2

**Option mounting bracket: Adjustable swing bracket, part no: 7334**

ITEM NO.	DESCRIPTION	PartNo	QTY.
1	Base mounting bracket	7326	1
2	Spring lock washer M5	51512001	2
3	Screw M5x10, A4-70 ISO 14583Torx	51010036	2
4	Mounting bracket adjustable part 1	7332	1
5	Mounting bracket adjustable part 2	7333	1
6	Screw M5x16	51016022	6
7	Washer M5	51612001	6
8	Spring lock washer M5	51512001	6
9	Nut M5	51712001	6
10	Screw M4x12 TORX ISO 14583	51016016	2

REVISIONS

REV.	DESCRIPTION	DATE	SIGN
A	Changed BOM list, removed part no 7284	11.03.2021	CKR
B	Removed text: "A set of 2 pcs is included in this part no." Due to production issues only 1 bracket is included in 1 part no.	23.04.2021	CKR
C	Changed M8x25 bolt with M8x25 welding bolt	22.09.2021	CKR
D	Replaced triangle bracket with eye nut bracket	25.10.2021	CKR
E	Added assembly of mounting bracket with pin to part no 7331	18.01.2022	CKR

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STRAHL  
TRANBERG

All mounting brackets for TEF 2780 LED Decklight

Customer Drawing

The information contained in this drawing is the sole property of R. Stahl Tranberg AS. Any reproduction in part or as a whole without the written permission of R. Stahl Tranberg AS is prohibited.

Rev.	Formal
E	A3

Drw. No.: 257A117888

Scale: 1:2

Date: 16.11.2020  
Design: CKR

## Maintenance and cleaning

The decklight 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

### EU Declaration of Conformity

EU-Konformitätserklärung

Déclaration de Conformité UE



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:

Decklight

dass das Produkt:  
que le produit.

Type(s), Typ(en), type(s):

TEF 2780 "BlueLine"

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)
<b>2014/35/EU:</b> Low Voltage Directive 2014/35/EU Niederspannungsrichtlinie 2014/35/UE: Directive Basse Tension	EN 61347-1:2015 EN 61347-2-13:2014 +A1:2017 EN 62384:2006 +A1:2009 EN 60529: 1991/A2:2013 IP66/67 Lamp housing EN 60529: 1991/A2:2013 IP66 Battery housing
<b>2014/30/EU</b> EMC Directive 2014/30/EU EMV-Richtlinie 2014/30/UE Directive CEM	EN 60945:2002 EN 55015:2013 +A1:2015 (LED Driver) EN 61000-3-2:2014 (LED Driver) EN 61000-3-3:2013 (LED Driver) EN 61000-4-2 ( -3, -4, -5, -6, -8 and -11) (LED Driver) EN 61547 (LED Driver) IEC 60533:2015 IEC 60945:2002/COR1:2008 IEC 61347-1, IEC 61347-2-13 (LED Driver) IEC62386-101,102 & part of 207 (LED Driver DALI)
<b>2011/65/EU</b> RoHS Directive 2011/65/EU RoHS-Richtlinie 2011/65/UE Directive RoHS	EN 50581:2012

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, 10.08.2021

Place and date  
Ort und Datum  
Lieu et date

Connie K. Ranatunga  
Product owner

Kjell Are Berg Hagen  
Quality & HSE Manager

## Appendix #1

### English

#### Installation instructions for the QUICKON installation system QPD

Different components are available. However, they are all connected in the same way (1):

- 1 Cable connector
- 2 Combination of cable connector and panel feed-through
- 3 Panel feed-through with connected cables
- 4 Panel feed-through with spade connection
- 5 QUICKON connector with QUICKON nut
- 6 QUICKON nut  
H-distributors and T-distributors (see 2)

#### 1 Safety note

Only qualified electrical personnel may install and start up the QPD components.

#### 2 Assembly

- Strip approx. 60 mm off the cable (3).
- Loop the PE conductor around the live conductors (4). As a result, the PE conductor will be pulled out of the terminal block last if strong tension is exerted on the cable.
- Insert the cable into the QUICKON nut.
- Fix the wires in the conductor support of the splice body (5).
- Cut off the wires with a diagonal cutter flush on the splice body (6).
- When connecting the QUICKON nut and QPD component, make sure that their markings are aligned.
- Screw the QUICKON nut together with the QPD component (7). For this, we recommend using either the socket wrench QSS..., a wrench, or a pliers.
- Screw the QUICKON nut as far as it will go, or with the specified torque. It must not be possible to unscrew the QUICKON nut again by hand.
- Seal off any non-allocated QUICKON connections using a protective cap.

#### QUICKON connector

The QUICKON connector is connected as described. It is equipped with a capacitive PE contact, polarized to prevent mismatching, and features touch-proof protection according to DIN EN 50274.

**WARNING:** Always de-energize the connector before connecting or disconnecting it.

#### 3 Dismantling

**WARNING:** Only detach the cable when it is de-energized.

- To detach the cable, completely unscrew the QUICKON nut (loosening torque 5 Nm).
- Hold the panel feed-throughs of type QPD W ... with a wrench.
- Pull out the splice body without using a tool.

#### 4 Reconnection

- The QUICKON connection may be rewired up to 10 times maximum with the same conductor cross-section. For this, you must cut the cable and re-make the connection from scratch.

#### 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)



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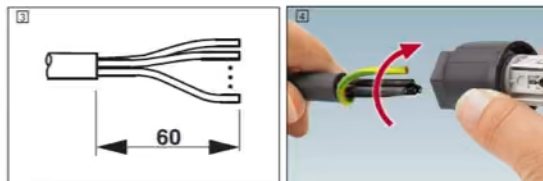
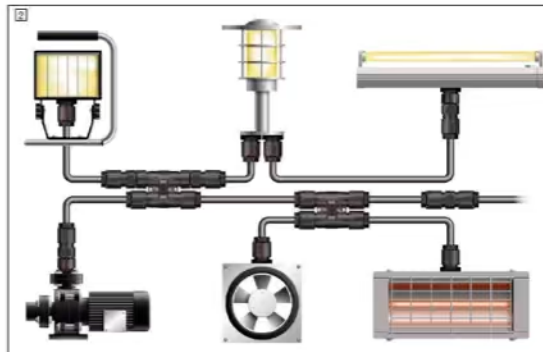
2018-06-06

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...



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