

EU-TYPE EXAMINATION CERTIFICATE

- [2] EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 2014/34/EU
- [3] EU-Type Examination Certificate Number: **Presafe 14 ATEX 4124** **Issue 4**
- [4] Product: **Junction boxes**
- [5] Manufacturer: **R. Stahl Tranberg AS**
- [6] Address: **Strandsvingen 6,
4032 Stavanger, NORWAY**
- [7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV GL Presafe AS, notified body number 2460, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential reports listed in section 16.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012/A11:2013, EN 60079-1:2014, EN 60079-7:2015, EN 60079-11:2012, EN 60079-18:2015 and EN 60079-28:2015
- [10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
- [11] This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- [12] The marking of the product shall include the following:

 **II 2 G Ex db eb mb ia/ib op pr IIC Gb T class, see [15]**



Date of issue:
2019-01-18




Bjørn Spongsveen
For DNV GL Presafe AS
The Certificate has been digitally signed.
See www.dnvgl.com/digitalsignatures for info

[13] **Schedule**

[14] **EU-Type Examination Certificate No:** Presafe 14 ATEX 4124 Issue 4

[15] **Description of Product**

This certificate covers increased safety boxes equipped with different equipment. This includes terminal blocks, signal lamps, push button, control switches, thermostats, bus bars, isolators, baffles, A-bricks and optical splicing box.

The boxes can be used to terminate Ex i circuits, the current and voltage are then limited according to Technical Data.

Termination can be combined with or without Ex e circuits. See limitations for non-is circuits in combination with is circuits in technical standards and document 100A111238

This certification also covers the use of certified optical splicing box in combination with increased safety enclosure.

Type designation

TEF 10aa bb c d

aa	58 or 59
bb	Dimension: 00 = Customer specific 1 to 99 = Predefined dim.
c	Surface treatment: 0 = Bright chemical dip 1 = Electro polished 2 to 9 Not defined
d	Configuration 0 = Empty enclosure 1 = With horizontal terminal rail PE bar 2 to 9 Not defined.
a	Enclosure configuration 0 = Hinged with window 2 = Hinged 1, 3 to 9 Not defined
b	Lid configuration 0 = Hinged lid with screw electro polished 1 = Hinged lid with cam lock 2 to 9. Not defined
c	Dimension 0 = Empty enclosure 1 = With horizontal terminal rail and PE bar. 2 to 9. Not defined

TEF 1060 a b c

TEF 1058256x, TEF 1058258x

TEF 1061

Type designation matrix for TEF 1061 X

X= 1-6 describing enclosure material:

- 1: 1.0330 (1,5-2mm)
- 2: 1.4301 (1,5-2mm)
- 3: 1.4404/1.4571 (1,5-2mm)
- 4: 1.0330 (2,1-3mm)
- 5: 1.4301 (2,1-3mm)
- 6: 1.4404/1.4571 (2,1-3mm)

Operating temperature - T_{amb}

Two different gasket types may be used with the operating temperature range:

TEF1058 and TEF1059:

EPDM gasket -40°C to +80°C and Silicone -60°C to +135°C

TEF1060:

EPDM gasket -20°C to +60°C and Silicone -50°C to +100°C

TEF1061

Seal 1 -60°C to +135°C, seal 2 -55°C to +85°C and seal 3 -25°C to +76°C

The operating temperature range /T_{amb} for the total enclosure, box included optional components are calculated by documented method (100A10247), with minimum /maximum operating temperature -60°C to +135°C, depended if silicone gasket is used. EPDM gives respectively -40°C to +80°C.

Temperature class

T4, T5 or T6
(dependent on internal components and T_{amb})

Electrical Data

Voltage:

max 11000V

Amperes:

max 2100A (see table below)

Electrical Safety Parameters, is and non-is combination

Voltage:

max 90V

Amperes:

max 3A

Non-Is voltage:

max 1000V

Electrical data, bus bar system

For bus-bar systems, the cable maximum rating is according to IEC TR 60890

Current rating for terminals, not copper bus bar solutions			
Terminal size / Crossection	Load	Terminal size / Crossection	Load
1,5mm ² AWG16	10A	50mm ² AWG1/0	135A
2,5mm ² AWG14	16A	70mm ² AWG2/0	165A
4mm ² AWG12	20A	95mm ² AWG4/0	210A
6mm ² AWG10	25A	120mm ² AWG250	230A
10mm ² AWG8	35A	150mm ² AWG300	250A
16mm ² AWG6	63A	185mm ² AWG400	300A
25mm ² AWG4	80A	240mm ² AWG500	350A
35mm ² AWG1	100A	300mm ² AWG600	450A

Degrees of protection (IP Code)

TEF 10aa bb c d and TEF 1060

IP66 or IP66/67

IP54, with some optional components.

TEF 1061

IP 56 for enclosure version with two hinged and integrated cam locks

IP 66 for all other enclosure versions

Ambient temperature:

-50°C to +100°C (see operating temperature)

Routine tests

A dielectric strength test according to Clause 7.1 of EN 60079-7 shall be carried out on equipment

[16] **Report No.:** D0001170 rev 4

[17] **Specific Conditions of Use**

N/A

[18] **Essential Health and Safety Requirements**

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9

[19] **Drawings and documents**

Number	Title	Rev.	Date
*TCL4280	Master document	G	2018-11-15
TCL5306	Master document	-	2016-04-06
*TCL5661	Master document	A	2018-11-14
*100A108267	Enclosure label Tranberg terminal boxes	C	2018-11-15
*100A111228	List	B	2018-11-14
100A10247	METHOD FOR CALCULATION OF MAXIMUM DISSIPATED POWER AND NO.OF COMPONENTS	D	2016-04-08

[20] **Certificate History**

Issue	Description	Issue date	Report no.
0	Original issue	2014-05-14	D0001170
1	Addition of bus bar and high voltage equipment	2016-04-11	D0001170 rev1
2	Additional switches and incorporation of ia, ib and op pr equipment	2017-02-02	D0001170 rev2
3	Updated reference to certificates in drawings. Update of standards EN 60079-1, EN 60079-7 and EN 60079-18.	2018-02-05	D0001170 rev3
4	Add new 8150 enclosure to new model TEF1061	2019-01-16	D0001170 rev4

END OF CERTIFICATE