

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 2
- [4] Product: Junction boxes
- [5] Manufacturer: 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 Nemko 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 60079-1:2007, EN 60079-7:2007, EN 60079-11:2012, EN 60079-18:2009 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 d e mb ia/ib op pr IIC Gb

T class, see [15]



Bjørn Spongsveen

For DNV Nemko Presafe AS

Information on electronic signature www.presafe.com



Date of issue:

2017-02-02

This certificate may only be reproduced in its entirety and without any change, schedule included.



EU-Type Examination Certificate

[13]

Schedule

[14] EU-TYPE EXAMINATION CERTIFICATE No.: Presafe 14 ATEX 4124 Issue 2

[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 op pr 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 op pr 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. |

TEF 1060 a b c

| | |
|---|--|
| 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 1058256x, TEF 1058258x

Operating temperature - T_{amb}

Two different types of gaskets may be used on the box lid:

- EPDM gasket type (temp. range -20°C to + 60°C)
- Silicone gasket type (temp. range -50°C to +100°C)

The operating temperature range / T_{amb} for the total enclosure, box included optional components are calculated by documented method (100A10247), with maximum operating temperature -50°C to +100°C, depended if silicone gasket is used. EPDM gives respectively -20°C to +60°C.



EU-Type Examination Certificate

Presafe 14 ATEX 4124, Issue 2

Temperature class

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

Electrical Data

Amperes: Voltage: max 11000V
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)

IP66 or IP66/67
IP54, with some optional components.

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 2

[17] **Specific Conditions of Use**

None

[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 | E | 2016-04-06 |
| TCL5306 | Master document | - | 2016-04-06 |
| TCL5661 | Master document | - | 2016-09-14 |

[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 |

END OF CERTIFICATE