# EU Type Examination Certificate CML 22ATEX3623X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **Enclosure Heater TEF 9202, TEF 9207, TEF 9208, TEF 9209**

3 Manufacturer **R. Stahl Tranberg AS**

4 Address **Strandsvingen 6,**
**4032 Stavanger,**
**NORWAY**

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 Eurofins CML B.V., Chamber of Commerce No 67386717, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, 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 equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-30-1:2017

EN IEC 60079-7:2015/A1:2018 EN IEC 60079-18:2015/A1:2017

10 The equipment shall be marked with the following:

| With flying leads: | With Thermostat and terminal box: | With Terminal box only: |
|---|---|---|
| Ex II 2 G | Ex II 2 G | Ex II 2 G |
| Ex 60079-30-1 IIC T* Gb | Ex 60079-30-1 eb mb IIC T* Gb | Ex 60079-30-1 eb IIC T* Gb |

*** Temperature Class will be assigned based on separately certified equipment that is used**

Ambient Temperature Range: -50°C ≤Ta≤+50°C

## 11 Description

The enclosure heaters comprise a stainless-steel mesh, which encloses the self-regulating cables. The enclosure heaters can be provided with flying leads, or with a junction box and with or without a thermostat.

The enclosure heater uses the following certified parallel self-regulating heating cables:

- Thermon® KSX 20-2 OJ
- Raychem® 15/20 QTVR1
- Raychem® 15/20 QTVR2

The self-regulating heating cables are spliced together with the cold-cable using Splice-kit with Heat-shrinkable tubes/sleeves.

The stainless-steel heaters come in models TEF 9207, TEF 9208 and TEF 9209. The polymer composite heater is model TEF 9202. Enclosure heaters of type TEF 9208, TEF 9209 and TEF 9202 0XX shall be installed inside an enclosure of IP min IP54. The TEF 9207 and TEF 9202 2XX have an IP rating of IP66.

Maximum withstand temperature, (Heater is de-energized, thermostat may be energized): +80°C.

The equipment incorporates separately certified glands and blanking elements rated to at least IP66 or better and temperature range of -50°C to +80°C.

| Type | Cable | Version Description | Temp. regulation | Power @ 0°C | Power @ 0°C |
|---|---|---|---|---|---|
| TEF9207 | KSX-20 | X | X | X | X |
| TEF 9208 | QTVR2 | | | | |
| TEF 9209 | QTVVR1 | | | | |
| | | 0-230VAC Integrated power cable | 0- N/A | 0- 0W | 0-0W |
| | | 1-230VAC Single with JB | 1- -10°C | 1-1000W | 1-100W |
| | | 2-230VAC Single with JB and thermostat | 2- -5°C | 2-2000W | 2-200W |
| | | 3-230VAC Double with JB | 3. 0°C | | 3-300W |
| | | 4-230VAC Double with JB and thermostat | 4- +5°C | | 4-400W |
| | | 5-120VAC Integrated power cable | 5- +10°C | | 5-500W |
| | | 6-120VAC Single with JB | 6- +15°C | | 6-600W |
| | | 7-120VAC Single with JB and thermostat | 7- +20°C | | 7-700W |
| | | 8-120VAC Double with JB | 8- +25°C | | 8-800W |
| | | 9-120VAC Double with JB and thermostat | 9- +30°C | | 9-900W |

Enclosure heater Type TEF 9207, based on trace heater KSX-20, assign Temperature Class T3.
Enclosure heater Type TEF 9208, based on trace heater QTVR2, assign Temperature Class T4.
Enclosure heater Type TEF 9209, based on trace heater QTVR1, assign Temperature Class T4.

| Type | Model | Voltage | Power |
|---|---|---|---|
| 9202 | 010 | 240 V | 50 W |
| 9202 | 011 | 240 V | 100 W |
| 9202 | 050 | 120 V | 50 W |
| 9202 | 051 | 120 V | 100 W |
| 9202 | 210 | 240 V | 50 W |
| 9202 | 211 | 240 V | 100 W |

Enclosure heater Type TEF 9202 (model 0XX), based on trace heater QTVR2, assign Temperature Class T4.
Enclosure heater Type TEF 9202 (model 0XX), based on trace heater QTVR1, assign Temperature Class T4.
Enclosure heater Type TEF 9202 (model 2XX), based on trace heater KSX-20, assign Temperature Class T3.
The equipment consists of the following Ex components and Ex equipment:

| Ex component/Ex equipment | Manufacturer | Certificate Number | Standards |
|---|---|---|---|
| Self-regulating Heating Cables Type KSX 20-2 OJ | Thermon | CSANe 20ATEX3059 | EN IEC 6009-0:2018<br>EN 60079-30-1:2017 |
| Self-regulating Heating Cables Type QTVR1 and QTVR2 | nVent Thermal LLC | SGS 20ATEX0050X | EN IEC 6009-0:2018<br>EN 60079-30-1:2017<br>EN 60079-31:2014<br>IEC 60079-31:2013 Ed 2<br>EN 60079-18:2015/A1:2017<br>EN 60079-7:2015+A1:2018 |
| Thermostat Type: 50 23 92xx | R.Stahl Tranberg | Presafe18ATEX12359X | EN IEC 6009-0:2018<br>EN 60079-18:2015 |
| Terminals, type UT2,5/UT4/UT6<br>PE Terminal up to UT10-PE | Phoenix Contact | KEMA 04ATEX2048U | EN IEC 6009-0:2018<br>EN 60079-7:2015+A1:2018 |
| Terminals, type USLKG10N | Phoenix Contact | KEMA 99ATEX4487U | EN IEC 6009-0:2018<br>EN 60079-7:2015+A1:2018 |
| Terminals, type MUT2,5 / MUT4 / MUT6<br>PE Terminal up to MUT6-PE | Phoenix Contact | SEV 13 ATEX 0178U | EN IEC 6009-0:2018<br>EN 60079-7:2015+A1:2018 |

**Notes:**

- Presafe 18ATEX12634X is superseded by this certificate.
- The product covered by Issue 0 of this certificate remains identical to that previously covered by Presafe 18ATEX12634X.
- Where Presafe 18 ATEX 12634X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.

**Variation 1**
This variation introduces the following modifications:

i. Inclusion of an alternative set of terminals.
ii. Introduction of an alternative marking option “With Terminal Box only: Ex 60079-30-1 eb IIC T* Gb”
iii. Update of the certification description to reflect the changes above and clarify the composite heaters options.
iv. Update of the label drawings.

## 12 Certificate history and evaluation reports

| Issue | Date | Associated report | Notes |
|---|---|---|---|
| 0 | 31 Jan 2023 | R15873A/00 | Issue of Prime Certificate |
| 1 | 27 Jan 2025 | R18285A/00 | Introduction of Variation 1 |

Note: Drawings that describe the equipment or component are listed in the Annex.

## 13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.

ii. Each heater shall be subjected to a dielectric strength test in accordance with clause 5.1.2 of EN 60079-30-1.

## 14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. The heaters with permanently connected unterminated flying lead cable need an appropriate protection of the free end of the cable (for example terminated in an Ex-e junction box).
ii. The heaters with thermostat shall be connected to a circuit breaker with rated current max. 16A and a breaking capacity of min. 1500A.
iii. The supply circuit shall include an electrical protection device in conformity with EN 60079-30-1 cl. 4.4.
iv. Enclosure heaters of type TEF 9208, TEF 9209 and TEF 9202 0XX shall be installed inside an enclosure with IP min. IP54 (this clause is not applicable for TEF 9207 and TEF 9202 2XX).

Additional Conditions for heater Type 9202:

v. Potential electrostatic charging hazard- For cleaning use moist cloth only! No solvent.
vi. If DIN-rail bracket is used for mounting on a rail, this shall be earthed.

# Certificate Annex

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|---|---|
| **Certificate Number** | **CML 22ATEX3623X Issue 1** |
| **Equipment** | **Enclosure Heater TEF 9202, TEF 9207, TEF 9208, TEF 9209** |
| **Manufacturer** | **R. Stahl Tranberg AS** |

The following documents describe the equipment or component defined in this Certificate:

**Issue 0**

| Drawing No | Sheets | Rev | Approved Date | Title |
|---|---|---|---|---|
| 920A105377 | 1 of 1 | D | 31 Jan 2023 | HEATER BASE 9207 SIZE A<br>DIM: 298x200x24mm<br>PART NO: 5485 |
| 920A105378 | 1 of 1 | D | 31 Jan 2023 | Heater Main Cover 9207 Size A<br>Dim: 232x200x23 mm<br>Part No: 5486 |
| 920A105379 | 1 of 1 | D | 31 Jan 2023 | Heater End Cover 9207 Size A<br>Dim: 200x160x23<br>Part No: 5487 |
| 920A105381 | 1 of 1 | E | 31 Jan 2023 | Heater base 9207 Size B<br>Dim: 548x240x24mm<br>Part No.: 5488 |
| 920A105382 | 1 of 1 | D | 31 Jan 2023 | Heater Main Cover 9207 Size B<br>Dim: 484x240x24mm |
| 920A105384 | 1 of 1 | C | 31 Jan 2023 | Enclosure Heater 9207/9208 |
| 920A105385 | 1 of 1 | F | 31 Jan 2023 | Heater Base 9207 Size C<br>Dim: 698x280x24mm |
| 920A105386 | 1 of 1 | D | 31 Jan 2023 | Heater Main Cover 9207 Size C |
| 920A105387 | 1 of 1 | D | 31 Jan 2023 | Heater End cover 9207 Size C<br>Dim: 280x65x23mm |
| 920A105388 | 1 of 1 | B | 31 Jan 2023 | Enclosure Heater 9207/9208 |
| 920A105389 | 1 of 1 | D | 31 Jan 2023 | Heater Base 9207 Size D<br>Dim: 868x360x24mm |
| 920A105390 | 1 of 1 | D | 31 Jan 2023 | Heater Main Cover 9207 Size D<br>DIM: 805x360x23mm |
| 920A105391 | 1 of 1 | D | 31 Jan 2023 | Heater end cover 9207 Size D<br>Dim: 360x65x23 |
| 920A105392 | 1 of 1 | A | 31 Jan 2023 | Heater Assembly 9207<br>Dim: 870x360x25mm |
| 920A106277 | 1 of 1 | H | 31 Jan 2023 | TEF 9207 Enclosure heater<br>Junction box 1058-10 |
| 920A105198 | 1 of 1 | F | 31 Jan 2023 | Enclosure Heater 9207 20VAC and 240 VAC Label |
| 920A113840 | 1 of 1 | A | 31 Jan 2023 | TEF 9202 Composite Heater Assembly |
| 920A111497 | 1 of 1 | A | 31 Jan 2023 | Enclosure Heater TEF 9202 Splice and End Connection |
| 920A111496 | 1 of 1 | D | 31 Jan 2023 | 9202 Heater Assembly |
| 920A111495 | 1 of 1 | A | 31 Jan 2023 | Top Cover for TEF 9202 |
| 920A111494 | 1 of 1 | A | 31 Jan 2023 | Base for TEF 9202 |

# Certificate Annex

**Certificate Number** **CML 22ATEX3623X Issue 1**

**Equipment** **Enclosure Heater TEF 9202, TEF 9207, TEF 9208, TEF 9209**

**Manufacturer** **R. Stahl Tranberg AS**

| Drawing No | Sheets | Rev | Approved Date | Title |
|---|---|---|---|---|
| 920A109546 | 1 of 1 | A | 31 Jan 2023 | Bending Radius Heating Cable |
| 920A109427 | 1 of 1 | B | 31 Jan 2023 | Enclosure Heater 9208 & 9209 Label |
| 920A105312 | 1 of 1 | A | 31 Jan 2023 | Enclosure Heater TEF 9207/9208 & 9209 Splice and end Seal methods |
| 920A105290 | 1 of 1 | B | 31 Jan 2023 | Enclosure Heater 9207/9208/9209 configuration Assembly |
| 920A105289 | 1 of 1 | C | 31 Jan 2023 | Enclosure Heater 9207/9208/9209 General Arrangement |
| 920A113837 | 1 of 1 | B | 31 Jan 2023 | Enclosure Heater 9202 Label |

**Issue 1**

| Drawing No | Sheets | Rev | Approved Date | Title |
|---|---|---|---|---|
| 920A105288 | 1 to 4 | I | 27 Jan 2025 | Enclosure heater 9207/9208/9209 Item list |
| 920A105198 | 1 of 1 | G | 27 Jan 2025 | Enclosure Heater 9207 120 VAC and 240 VAC Label |
| 920A109427 | 1 of 1 | C | 27 Jan 2025 | Enclosure Heater 9208 & 9209 120 VAC and 240 VAC Label |
| 920A113837 | 1 of 1 | C | 27 Jan 2025 | Enclosure Heater 9202 Label |