



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx PRE 18.0037X

Issue No: 0

Certificate history:

Issue No. 0 (2018-06-19)

Status: **Current**

Page 1 of 3

Date of Issue: **2018-06-19**

Applicant: **R. Stahl Tranberg AS**  
Strandsvingen 6  
N-4068 Stavanger  
**Norway**

Equipment: **Enclosure heater**

*Optional accessory:*

Type of Protection: **Trace heating Ex e Alt. Trace heating and Encapsulation Ex e mb**

Marking:

Ex eb IIC T3-T5 Gb,  $-50^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$

Alt.

Ex eb mb IIC T3-T5 Gb,  $-50^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$

*Approved for issue on behalf of the IECEx  
Certification Body:*

Arne Hortman

*Position:*

Certification Manager

*Signature:  
(for printed version)*

*Date:*

2018-06-19

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**DNV GL Nemko Presafe AS**  
Veritasveien 3  
1363 Høvik  
Norway





# IECEX Certificate of Conformity

Certificate No: IECEX PRE 18.0037X Issue No: 0

Date of Issue: **2018-06-19** Page 2 of 3

Manufacturer: **R. Stahl Tranberg AS**  
Strandsvingen 6  
N-4068 Stavanger  
**Norway**

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.

## STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-18 : 2014</b> Edition:4.0	Explosive atmospheres – Part 18: Equipment protection by encapsulation “m”
<b>IEC 60079-30-1 : 2007-01</b> Edition:1	Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General and testing requirements
<b>IEC 60079-7 : 2015</b> Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

## TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[NO/NEM/ExTR11.0020/00](#)      [NO/NEM/ExTR11.0020/01](#)      [NO/PRE/ExTR18.0038/00](#)

Quality Assessment Report:

[NO/NEM/QAR10.0006/06](#)



# IECEX Certificate of Conformity

Certificate No: IECEx PRE 18.0037X

Issue No: 0

Date of Issue: 2018-06-19

Page 3 of 3

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

This certificate is based on the former certificates IECEx NEM 11.0005X (TEF 9206, TEF 9207, TEF 9208, TEF 9209) and IECEx PRE 17.0016X (TEF 9202).

This Certificate covers enclosure heater with or without junction box and with or without thermostat.

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

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

The self-regulating heating cable is spliced together with the cold-cable using Splice-kit with Heat-shrinkable tubes/sleeves, tested together with the self-regulating cables in this certificate.

The certificate covers stainless steel heaters: TEF 9206, TEF 9207, TEF 9208 and TEF 9209

The certificate also covers polymer composite heaters: TEF 9202

Some versions are certified for installation inside an enclosure of IP min IP54. Others are certified regardless of the enclosure. This is further described in the user manual.

Suitable IECEx certified glands and blanking elements with the following specifications can be used: IP66 or better, Temperature range: -50°C to +80°C.

For further details see *Annex to IECEx PRE 18.0037X Issue 0*

### SPECIFIC CONDITIONS OF USE: YES as shown below:

-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).

-The heaters with thermostat shall be connected to a circuit breaker with rated current max. 16A and a breaking capacity of min. 1500A.

-The supply circuit shall include an electrical protection device in conformity with EN 60079-30-1 cl. 4.3 .

-Enclosure heaters of type TEF 9206, 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 TEF 9202:

-Potential electrostatic charging hazard – For cleaning use moist cloth only! No solvent.

-If DIN-rail bracket is used for mounting on a rail, this shall be earthed.

### Annex:

[Annex to IECEx PRE 18.0037X.pdf](#)

**Annex to certificate: IECEx PRE 18.0037X**

**Type Designation**

Type	Cable	Version description	Temp. regulation	Power @ 0°C	Power @ 0°C
TEF 9206	RSX-15	X	X	X	X
TEF 9207	KSX-20				
TEF 9208	QTVR2				
TEF 9209	QTVR1				
		0-230VAC Integrated powercable	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 powercable	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 9206, based on trace heater RSX-15, assign Temperature Class T5.

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.

**Technical Data**

120-250V AC, 50/60Hz

External fuse: Max16A, min breaking capacity 1500A (if thermostat is used. Otherwise according to 60079-30-1)

Max 2000 W (TEF 9206, TEF 9207, TEF 9208, TEF 9209)

Max 100W (TEF 9202)

**Annex to certificate: IECEx PRE 18.0037X**

**Ingress Protection Code**

TEF 9202 2XX, TEF 9207: IP66 according to EN 60529

TEF 9202 0XX, TEF 9206, TEF 9208, TEF 9209: To be installed inside a certified enclosure with IP min. IP54.

**Maximum withstand temperature, (Heater is de-energized, thermostat may be energized):**

+80°C

**Ex components used**

Ex component	Certificate	IECEx Standard	Comment
Self-regulating Heating Cables Type KSX 20-2 OJ	IECEx FMG 06.0009	IEC 60079-0: 2004, IEC 60079-30-1: 2007, IEC 62086-1: 2001	Written EC Declaration of Conformity and gap analyse towards IEC 60079-0:2011 has been made and found compliant.
Self-regulating Heating Cables Type RSX 15-2-FOJ	IECEx KEM 07.0052	IEC 60079-0: 2004, IEC 60079-30-1: 2007, IEC 62086-1: 2001	Written EC Declaration of Conformity and gap analyse towards IEC 60079-0:2011 has been made and found compliant.
Self-regulating Heating Cables Type QTVR1 and QTVR2	IECEx BAS 06.0045X	IEC 60079-0: 2007, IEC 60079-30-1: 2007, IEC 62086-1: 2001	Written EC Declaration of Conformity and gap analyse towards IEC 60079-0:2011 has been made and found compliant.
Thermostat Type: 50 23 92xx	IECEx NEM 11.0007X	IEC 60079-0: 2011, IEC 60079-18: 2009	Gap analyse towards IEC 60079-18:2014 has been made and found compliant.
Terminals, type UT2,5/UT6	IECEx KEM 06.0027U	IEC 60079-0: 2011, IEC 60079-7: 2017	Certified according to the most recent standards.
Terminals, type USLKG10N	IECEx KEM 06.0035U	IEC 60079-0: 2011, IEC 60079-7: 2006	Gap analyse towards IEC 60079-7:2015 has been made and found compliant.

**Routine Test**

Each heater shall be subject to the Dielectric test and verified of rated output according to clause 5.2.1 and 5.2.2 in IEC 60079-30-1: 2007.

**Annex to certificate: IECEx PRE 18.0037X**

---

**Special Conditions for Safe Use**

- 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).
- The heaters with thermostat shall be connected to a circuit breaker with rated current max. 16A and a breaking capacity of min. 1500A.
- The supply circuit shall include an electrical protection device in conformity with EN 60079-30-1 cl. 4.3.
- Enclosure heaters of type TEF 9206, 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 TEF 9202:**

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