



# 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 18.0032U

Issue No: 0

Certificate history:

Issue No. 0 (2018-05-09)

Status: **Current**

Page 1 of 3

Date of Issue: **2018-05-09**

Applicant: **Techno Controls**

54/1, Meladi Estate Gota Railway Crossing, Gota Ahmedabad – 382481, Gujarat  
India

Equipment: **Stator Winding Temperature Detectors, (TSRA, TSRB, TSRC, TSRD, TSRK)**

*Optional accessory:*

Type of Protection: **Increased safety "eb"**

Marking:

Ex eb IIC Gb

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

Arne Hortman

*Position:*

Certification Manager

*Signature:  
(for printed version)*

*Date:*

2018-05-09

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





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Date of Issue: 2018-05-09 Page 2 of 3  
Manufacturer: **Techno Controls**  
54/1, Meladi Estate Gota Railway Crossing, Gota Ahmedabad – 382481, Gujarat  
**India**

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:

**IEC 60079-0 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition:6.0  
**IEC 60079-7 : 2017** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

*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/PRE/ExTR18.0026/00](#)

Quality Assessment Report:

[NO/DNV/QAR14.0003/02](#)



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Page 3 of 3

## Schedule

### EQUIPMENT:

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

Stator Winding Temperature Detectors/ Resistance Temperature detectors-(RTC) are used to measure winding temperature of motors/generators. Basically, these sensors are sandwiched between the windings of motors/generators. Unlike on-off device, it allows continues measurement of temperature. Sensing Portion extends throughout the body and average temperature is measured. Thermal and high dielectric strength is basic requirement of this product. This component is a passive device and do not dissipate heat in normal operation. These RTD's are categorised as a component, hence only required clauses has been addressed. The type of protection is by method 'e'. the operating temperature range is -50°C to 180°C.

### Type designation

TSRA, TSRB, TSRC, TSRD, TSRK

### Electrical Data

10V- AC/DC, 10mA- AC/DC 1.5W

### Temperature range

-50°C to +180°C

### Schedule of limitations

The terminations are need to protected by suitable protection method according IEC 60079-0.

The electrical connection should be connected to approved unit according to application or to terminal box according to requirements at the connecting site.

The sensors can only be connected to measuring equipment prepared for PT100/PT1000 sensors.

The high voltage test need to be performed when completely assembled inside the motor.

**SPECIFIC CONDITIONS OF USE: NO**