

# EU-Type Examination Certificate

- [2] **COMPONENT INTENDED FOR USE ON/IN AN EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 2014/34/EU**
- [3] **EU-Type Examination Certificate Number:** Presafe 18 ATEX 12507U Issue 0
- [4] **Product:** Resistance Temperature Detector for Stator Windings.
- [5] **Manufacturer:** Techno Controls
- [6] **Address:** 54/1, Meladi Estate Gota Railway Crossing, Gota Ahmedabad – 382481, Gujarat, India
- [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 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 and EN 60079-7:2015**
- [10] **The sign “U” is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system**
- [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 eb IIC Gb

Arne Hortman  
For DNV GL Nemko Presafe AS

The Certificate has been digitally signed.  
See [www.presafe.com/digital\\_signatures](http://www.presafe.com/digital_signatures) for more info



Date of issue: 2018-05-09

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

**[13] Schedule**

**[14] EU-TYPE EXAMINATION CERTIFICATE No.:** Presafe 18 ATEX 12507U Issue 0

**[15] Description of Product**

Stator Winding Temperature Detectors/ Resistance Temperature detectors-(RTD) 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**

10 V ac/dc, 10 mA- ac/dc, 1.5 W

**Temperature range**

-50°C to +180°C

**Routine tests**

Dielectric strength test according to clause 6.1 EN 60079-7:2015,

- For TSRA - 3 KV/50-60Hz for 1 minute
- For TSRB - 3 KV/50-60Hz for 1 minute
- For TSRC - 5 KV/50-60Hz for 1 minute
- For TSRD - 3 KV/50-60Hz for 1 minute
- For TSRK - 5 KV/50-60Hz for 1 minute

**[16] Report No.:** D0003262

**[17] Schedule of Limitations**

The terminations need to be protected by suitable protection method according IEC 60079-0:2011.

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 may only be connected to measuring equipment for PT100/PT1000 sensors.

Temperature measuring/operating range: -50°C to 180°C.

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

**[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
EX-110620078/R	Stator winding temperature detector- TSRA-R	04	2018-03-17
EX-110620078/S	Stator winding temperature detector- TSRA-S	04	2018-03-17
EX-110620079/R	Stator winding temperature detector- TSRB-R	04	2018-03-17
EX-110620079/S	Stator winding temperature detector- TSRB-S	04	2018-03-17
EX-110620080/R	Stator winding temperature detector- TSRC-R	04	2018-03-17
EX-110620080/S	Stator winding temperature detector- TSRC-S	04	2018-03-17
EX-110620081/R	Stator winding temperature detector- TSRD-R	04	2018-03-17
EX-110620081/S	Stator winding temperature detector- TSRD-S	04	2018-03-17
EX-110620086/R	Stator winding temperature detector- TSRK-R	02	2018-03-17
EX-110620086/S	Stator winding temperature detector- TSRK-S	02	2018-03-17
EX-2410201301	Nameplate	01	2018-03-17
EX-2010201301	Marking-I details	01	2018-03-17
EX-2410201302	Annexure-II (Sample RML)	00	2013-10-24

## [20] Certificate History

Issue	Description	Issue date	Report no.
0	Original issue and replaces DNV-2008-OSL-ATEX-40059U	2018-05-09	D0003262

END OF CERTIFICATE