



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Component intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 16ATEX2097U** Issue: **1**

4 Component: **TSR* series slot resistance thermometer and
TBTD-series bearing temperature detectors**

5 Applicant: **Techno Controls**

6 Address: 54/1, Survey No. 229, Meldi Estate
Gota Railway Crossing
Gota
Ahemdabad-382481
India

7 This component and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., notified body number 2813 in accordance with Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this component has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of a component 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 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012/A11:2013

EN 60079-11:2012

10 The sign 'U' is placed after the certificate number to indicate that the product assessed is a component and may be subject to further assessment when incorporated into equipment. Any limitations of use are listed in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified component. If applicable, further requirements of this Directive apply to the manufacture and supply of this component.

12 The marking of the component shall include the following:



II 1G

Ex ia IIC Ga

Ta = -50°C to +180°C

Project Number 1005

Signed:

Title: Director of Operations

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CSA Group Netherlands B.V.
Utrechtseweg 310,
6812 AR, Arnhem,
Netherlands



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 16ATEX2097U

Issue 1

13 DESCRIPTION OF COMPONENT

The TBTD-* series and TSR* series resistance temperature devices (RTDs) are typically used to measure the internal temperature of motors/generators. The TBTD-* series RTDs are bearing temperature detectors, whereas the TSR* series RTDs are slot resistance thermometers.

Both series are available with 2, 3 or 4-wire options and are connected by means of flying leads to an intrinsically safe supply and have the following entity parameters:

$U_i = 12\text{ V}$

$I_i = 35\text{ mA}$

$P_i = 105\text{ mW}$

C_i = cable capacitance only

L_i = cable inductance only

The type numbers are as follows:

- TBTD-*-series bearing temperature detectors (where * = K, L or O)
- TSR*-series stator winding temperature detectors (where * = B, C, D or K)

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	24 February 2017	R70067507A	The release of the prime certificate.
1	15th October 2019	1005	<ul style="list-style-type: none">• Transfer of certificate Sira 16ATEX2097U from Sira Certification Service to CSA Group Netherlands B.V..

15 SCHEDULE OF LIMITATIONS

15.1 The RTDs have been assessed for an ambient range of -50°C to $+180^{\circ}\text{C}$. The maximum temperature rise does not exceed 13°K above ambient.

15.2 The RTDs may be used in flammable dust zones (20, 21 and 22) provided they are inside a suitably-certified enclosure.

15.3 TSR-* series only: where the insulated wiring has no overall sheath, the conductor insulation has a minimum thickness of only 0.09 mm (code Z) or 0.12 mm (codes Q, R, W, X, Y), so precautions shall be taken to prevent contact with other current-carrying conductors, for example by the use of additional insulation or routing away from other conductors.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

Certificate Annexe



Certificate Number: Sira 16ATEX2097U

Component: TSR* series slot resistance thermometer and
TBTD-series bearing temperature detectors

Applicant: Techno Controls

Issue 0

Drawing no.	Sheets	Rev.	Stamp date	Description
EX-0104201601	1 of 1	02	06 May 16	Marking
EX-110620079/S	1 of 1	05	06 May 16	Assembly, TSRB slot resistance thermometer
EX-110620080/S	1 of 1	05	06 May 16	Assembly, TSRC slot resistance thermometer
EX-110620081/S	1 of 1	05	06 May 16	Assembly, TSRD slot resistance thermometer
EX-110620086/S	1 of 1	03	06 May 16	Assembly, TSRK slot resistance thermometer
Ex-0409201501/S	1 of 1	00	06 May 16	Assembly, TBTD-L bearing temperature detector
Ex-0709201503/S	1 of 1	00	06 May 16	Assembly, TBTD-O bearing temperature detector
Ex-1711201401/S	1 of 1	01	06 May 16	Assembly, TBTD-K bearing temperature detector

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