



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 12ATEX2084X** Issue: **2**

4 Equipment: **UST2 Ultrasonic Transducer**

5 Applicant: **Rohrback Cosasco Systems**

6 Address: **11841 East Smith Ave
Santa Fe Springs
California
90670
USA**

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

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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 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:

IEC 60079-0:2011 IEC 60079-11:2011

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of the equipment shall include the following:



II 2G
Ex ia IIC T4 Gb
Ta = -40°C to +70°C

Project Number 29833

A C Smith
Certification Manager

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The UST2 is a piezo-electric ultrasonic transducer that is designed to be attached by adhesive to a metal pipe, for measuring metal thickness. It is equipped with an integral RTD for temperature monitoring and contains an embedded memory chip inside its connector to retain user-configured ID characteristics. It is intended to be periodically interrogated by a monitoring device; this may be an ULTRACORR-2, Sira 12ATEX2083X, manufactured by Rohrback Cosasco Systems, alternatively, another appropriately certified device may be used provided it is suitable for the application and has matching entity parameters.

The high voltage supply to the piezo-electric transducer and the low voltage supply to the RTD are treated as a single, intrinsically safe circuit with the following combined entity parameters:

	Combined parameters
Ui	126 V ac
Ii	60 mA
Pi	173 mW
Ci	0.85 nF
Li	0

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	20 April 2012	R27101B/00	The release of the prime certificate.
1	6 June 2012	R27101B/01	Report no. R27101B/01 replaced R27101B/00 to allow the specification of the insulation material around the piezo transducer to be more generic.
2	20 February 2013	R29833A/00	It was recognised that the manufacturer has not made any UST2 devices in accordance with the design covered by Issues 0 and 1. It is therefore their intention to replace this model with the one introduced by Issue 2, also known as the UST2, which incorporates the following design modifications: i. The approval of mechanical changes, including a thinner diaphragm. ii. The entity parameter Ci was changed from 1 nF to 0.85 nF. iii. Minor changes to the artwork were acknowledged. iv. The Description, Special Conditions for Safe Use and Conditions of Certification were revised so that they apply specifically to the new model design.

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- 15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)
- 15.1 The UST2 has been assessed as compliant for a T4 temperature class at an upper ambient temperature of 70°C. It has also been assessed with the front face attached to a process pipe up to 150°C provided that the cable end of the UST2 is at no more than 70°C. However, it should be noted that in this condition, with a pipe surface temperature at 150°C, the pipe surface itself limits the temperature class to T3.
- 15.2 The metallic ring on the top of the enclosure may store a level of electrostatic charge that could become incendive. Therefore, the user/installer shall implement precautions to prevent the build-up of electrostatic charge e.g. locate the equipment where a charge-generating mechanism (such as wind-blown dust) is unlikely to be present. Refer to user instructions for further information.
- 15.2 Only portable, battery-powered equipment, with no connection to earth, can be connected to the UST2. The Rohrbach-Cosasco Systems Ultracorr (Sira 12ATEX2083) is suitable equipment.
- 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.
- 17 **CONDITIONS OF CERTIFICATION**
- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

Certificate Annexe

Certificate Number: Sira 12ATEX2084X
Equipment: UST2 Ultrasonic Transducer
Applicant: Rohrbach Cosasco Systems



Issues 0 and 1 The drawings listed with these Issues were rationalised and have been superseded by those detailed in Issue 2

Issue 2

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
646129 -1	1 of 1	-	04 Apr 12	UST2 IECEx & ATEX marking
646131	1 to 7	B	11 Feb 13	UST2 PCB artwork
646132	1 of 1	A	11 Feb 13	UST2 schematic and parts list
646133	1 to 2	B	19 Feb 13	UST2 general assembly

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