



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 08ATEX2097U** Issue: **2**

4 Component: **TX6350 eModule - Toxic Gas Sensor (Group I)**

5 Applicant: **Trolex Limited**

6 Address: Hazel Grove  
Stockport  
Cheshire SK7 5DY  
UK

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 60079-0:2009

EN 60079-11:2007

EN 50303: 2000

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:



I M1

Ex ia I Ma (-20°C ≤ T<sub>a</sub> ≤ +40°C)

Project Number 2661

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 08ATEX2097U

Issue 2

#### 13. DESCRIPTION OF COMPONENT

The TX6350 Toxic Gas Sensor is designed to measure toxic gas concentration by means of an electrochemical cell and to electronically convert the measured value into an output signal that can be monitored by suitably certified gas monitoring equipment into which the sensor is plugged.

The TX6350 Toxic Gas Sensor contains a sub-assembly comprising a CPU Board, Connector Board and either a Toxic Baseboard or an Oxygen Baseboard. The sub-assembly fits inside a plastic enclosure with one face of the Connector Board exposed to connect to external circuit.

Input Parameters		
At Connector CON 1		
Pin 1 wrt 2	Pin 3 & 4 combined wrt 2	Pins 5 wrt 2 and 6 wrt 2
U <sub>i</sub> = 14.4 V	U <sub>i</sub> = 6.51 V	U <sub>i</sub> = 6.51 V
	I <sub>i</sub> = 1.52 A	I <sub>i</sub> = 27 mA
	P <sub>i</sub> = 1.38 W	P <sub>i</sub> = 40 mW

Output Parameters
At Connector CON 1
U <sub>o</sub> = 1.26 V (generated by the electrochemical cell)
C <sub>i</sub> = 3.887 µF
L <sub>i</sub> = 0

**Variation 1** - This variation introduced the following changes:

- Following appropriate re-assessment to demonstrate compliance with the requirements of the latest standards, EN 60079-0:2006 was replaced by EN 60079-0:2009, the markings in section 12 were updated accordingly.
- The Connection PCB was updated to the latest version that has reased pad spacing.
- The PCB thickness requirement was removed from the PCB drawings.
- The Special Condition of Safe Use which states that 'Input to Pins 3 & 4 on CON1 must be protected by a suitable external 125 mA fuse' was removed.
- At the request of the Applicant, the name of the component, formerly TX6350 Toxic Gas Sensor, was expanded to become TX6350 eModule - Toxic Gas Sensor (Group I).

#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	29 September 2008	R59A17263B	The release of the prime certificate.
1	21 December 2010	R23465A/00	The introduction of Variation 1.
2	31st October 2019	2661	<ul style="list-style-type: none"><li>Transfer of certificate Sira 08ATEX2097U from Sira Certification Service to CSA Group Netherlands B.V..</li></ul>

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## SCHEDULE

### EU-TYPE EXAMINATION CERTIFICATE

Sira 08ATEX2097U  
Issue 2

			<ul style="list-style-type: none"><li>• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i></li></ul>
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#### 15 SPECIAL CONDITIONS FOR SAFE USE

- 15.1 The Toxic Sensor has exposed external connections, which must be provided with an ingress protection of at least IP54.

#### 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 08ATEX2097U

**Component:** TX6350 eModule - Toxic Gas Sensor (Group 1)

**Applicant:** Trolex Limited

## Issue 0

Drawing	Sheets	Rev.	Date:	Title:
P5553.24	1 of 1	B	21 Aug 08	General Assembly
P5553.37	1 of 1	A	02 Sep 08	Label
P5553.22	1 of 1	A1	13 Aug 08	Electrochemical Gas Sensor Block Diagram
P5553.03	1 to 2	A2	30 May 08	Circuit Diagram Sensing Module Toxic Baseboard
P5553.05	1 to 2	A2	30 May 08	Circuit Diagram Sensing Module Oxygen Baseboard
P5553.01	1 to 2	A2	24 Apr 07	Circuit Diagram CPU Board
P5553.04	1 of 1	A	02 Apr 08	PCB Toxic Baseboard
P5553.06	1 of 1	A	03 Apr 08	PCB Oxygen Baseboard
P5553.02	1 of 1	A	03 Apr 08	PCB Sensing Module CPU
P5553.21	1 of 1	A	03 Apr 08	PCB Connector Board

## Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
P5553.24	1 of 1	C	09 Dec 10	General Assembly
P5553.37	1 of 1	B	09 Dec 10	Label
P5553.04	1 of 1	B	09 Dec 10	PCB Toxic Baseboard
P5553.06	1 of 1	B	09 Dec 10	PCB Oxygen Baseboard
P5553.02	1 of 1	B	09 Dec 10	PCB Sensing Module CPU
P5553.21	1 of 1	B	09 Dec 10	PCB Connector Board

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