




# 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 SIR 08.0036U** issue No.:1  
Status: **Current**  
Date of Issue: **2011-01-10** Page 1 of 5  
Applicant: **Trolex Limited**  
Newby Road  
Hazel Grove  
Stockport SK7 5DY  
United Kingdom  
Electrical Apparatus: **TX6350 eModule - Toxic Gas Sensor (Group I)**  
*Optional accessory:*  
Type of Protection: **Intrinsic Safety**  
Marking: **Ex ia I Ma**  
**(-20°C ≤ Ta ≤ +40°C)**  
*Approved for issue on behalf of the IECEx* C Ellaby  
*Certification Body:*  
*Position:* Certification Officer  
*Signature:*   
*(for printed version)*  
*Date:* 2011-01-10

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:

**SIRA Certification Service**  
Rake Lane  
Eccleston  
Chester  
CH4 9JN  
United Kingdom

**sira**  
CERTIFICATION



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Manufacturer: **Trox Limited**  
Newby Road  
Hazel Grove  
Stockport SK7 5DY  
**United Kingdom**

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 electrical 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 : 2007-10** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition: 5

**IEC 60079-11 : 2006** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition: 5

*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:

[GB/SIR/ExTR08.0123/00](#)  
[GB/SIR/ExTR10.0321/00](#)

Quality Assessment Report:

[GB/SIR/QAR07.0017/00](#)  
[GB/SIR/QAR07.0017/01](#)  
[GB/SIR/QAR07.0017/02](#)



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## Schedule

### EQUIPMENT:

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

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.

### CONDITIONS OF CERTIFICATION: NO

Empty box for conditions of certification.



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## EQUIPMENT(continued):

<b>Input Parameters:</b>
<b>At Connector CON 1</b>
<b>Pin 1 wrt 2</b>
U <sub>i</sub> = 14.4 V
<b>Pin 3 &amp; 4 combined wrt 2</b>
U <sub>i</sub> = 6.51 V
I <sub>i</sub> = 1.52 A
P <sub>i</sub> = 1.38W
<b>Pins 5 wrt 2 and 6 wrt 2</b>
U <sub>i</sub> = 6.51 V
I <sub>i</sub> = 27 mA
P <sub>i</sub> = 40 mW
<b>Output Parameters:</b>
<b>At Connector CON 1</b>
U <sub>o</sub> = 1.26 V (generated by the electrochemical cell)
C <sub>i</sub> = 3.887 μF
Li = 0

The user shall note the following Special Point for Noting.

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



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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 – this Issue introduced the following changes:	
1	Following appropriate re-assessment to demonstrate compliance with the requirements of the latest standards, IEC 60079-0:2004 Ed 4 was replaced by IEC 60079-0:2007 Ed 5, the markings were updated accordingly.
2	The Connection PCB was updated to the latest version that has increased pad spacing.
3	The PCB thickness requirement was removed from the PCB drawings.
4	The Special Condition of Safe Use which states that 'Input to Pins 3 & 4 on CON1 must be protected by a suitable external 125mA fuse' was removed.
5	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).