



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

Certificate No.: issue No.:

Status:

Date of Issue: Page 1 of 4

Applicant: **Trox Limited**
Hazel Grove
Stockport
Cheshire
SK7 5DY
United Kingdom

Electrical Apparatus: **TX6350 – Infrared Gas Sensing eModule (Group I)**
Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ia I Ma**
Note: IEC 60079-0:2007 Edition 5 (used for guidance in respect of marking)

*Approved for issue on behalf of the IECEx
Certification Body:* D R Stubbings BA MIET

Position: Certification Manager

Signature:
(for printed version)

Date:

2011-03-30

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



IECEx Certificate of Conformity

Certificate No.: IECEx SIR 10.0185U

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Manufacturer: **Trox Limited**
Hazel Grove
Stockport
Cheshire
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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

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/ExTR11.0057/00](#)

Quality Assessment Report:

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



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The TX6350 - Infrared Gas Sensing eModule is an Ex component designed to measure gas concentration by means of a Dyanment Type MSHia *** or Type MSHia-P *** Gas Sensor (separately certified component to the code Ex d+ia I Ma). The microcontroller inside the module communicates digitally with the Gas Sensor to obtain the current gas reading. This reading is provided as an output signal which is monitored by suitably certified equipment into which the module is plugged.

The Infrared Gas Sensing eModule contains a sub-assembly comprising a CPU board (alternatively CPU OSC Board), baseboard and a connector board. The CPU board makes use of a pressure sensor which is used to monitor normal atmospheric pressure. The sub-assembly fits inside a plastic enclosure with one face of the connector board exposed to connect with an 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 _i = 14.4 V	U _i = 6.51 V	U _i = 6.51 V
	I _i = 1.52 A	I _i = 27 mA
	P _i = 1.38 W	P _i = 40 mW

Output Parameters at Connector CON 1 Pins 3 to 6

U _o = 0	C _i = 2.4 µF	L _i = 0
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CONDITIONS OF CERTIFICATION: NO



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EQUIPMENT(continued):

The Manufacturer shall comply with the following condition of manufacture:

- The TX6350 Infrared Gas Sensing eModule incorporates a previously certified component under Sira 04ATEX1357U and IECEx SIR 05.0053U, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform Sira of any modifications of the devices that may impinge upon the explosion safety design of their products.

Certificate No.	Component	Manufacturer	Marking	Ambienttemperature
IECEx SIR 05.0053U	Type MSHia*** and Type MSHia-P*** Gas Sensor	Dynamant Ltd	Ex d+ia I Ma	-20°C to +40°C

The following are Special Points for Noting

- The Type TX6350 Infrared Gas Sensing eModule has exposed external connections that shall be provided with an ingress protection of at least IP54.
- The Type TX6350 Infrared Gas Sensing eModule shall be effectively protected from impact.
- Input to Pins 3 & 4 on CON 1 shall be protected by a suitable external 125mA fuse.