



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 01ATEX1073U** Issue: **8**

4 Component: **VQ500 Series Gas Sensing Heads**

5 Applicant: **SGX Europe Sp. z o.o.**

6 Address: **Ligocka 103
40-568 Katowice
Poland**

7 This component and any acceptable variation thereto are 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 IEC 60079-1: 2014 Ed. 7

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 2G
Ex db IIC Gb
Ta -40°C to +55°C



I M2
Ex db I Mb
Ta -40°C to +55°C

Project Number 80065177

Signed: J A May

Title: Director of Operations

CSA Group Netherlands B.V.
Utrechtseweg 310, Building B42,
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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 01ATEX1073U
Issue 8

13 DESCRIPTION OF COMPONENT

The VQ500 Series Gas Sensing Heads are intended to detect flammable gases and contain two pellistors, one of which is for reference. The pellistors are potted, along with associated circuitry on a PCB, into a one-part stainless steel housing with electrical connections made via three pins, which pass through the potting compound. A stainless steel sinter is fused into the enclosure.

The sensing heads may be manufactured with or without a second PCB at the rear of the component.

The maximum input power, P_i , is 2.5 W.

Variation 1 - This variation introduced the following changes:

- i. To permit the ambient temperature range to be increased:
From: -20°C to +40°C
To: -40°C to +55°C
- ii. To permit the maximum input power, P_i , to be increased from 1.0 W to 2.5 W.

Variation 2 - This variation introduced the following changes:

- i. Re-assess the equipment for compliance with the latest European Standards. Following appropriate re-assessment to demonstrate compliance with the requirements of the EN 60079 series of standards, the documents originally listed in section 9, EN 50014:1997 (amendments A1 to A2) and EN 50018:2000 were replaced by EN 60079-0:2006 and EN 60079-1:2007, the markings in section 12 were updated accordingly.
- ii. Minor drawing changes on product label.
- iii. To permit alternative materials of manufacturer for the housing and sinter components as detailed on drawing FM532571D, inclusive of additional minor drawing changes.

Variation 3 - This variation introduced the following changes:

- i. The label, drawing number N24106R, was amended to include a new product identity for the end user and an optional bar code.
- ii. Drawing numbers FM543263A & FM543379A were modified to define the exact measurement points for the potting thickness.
- iii. The Special Conditions for Safe Use, para 15.2 were amended.

Variation 4 - This variation introduced the following change:

- i. The Applicant's name and address was changed from e2v Technologies (UK) Limited, 106 Waterhouse Lane, Chelmsford, Essex CM1 2QU, UK to SGX Sensortech (IS) Ltd 2 Hanbury Road, Widford Industrial Estate, Chelmsford, Essex CM1 3AE.

Variation 5 - This variation introduced the following change:

- i. Following appropriate re-assessment to demonstrate compliance with the requirements of the latest technical knowledge, EN 60079-0: 2006 and EN 60079-1:2007, were replaced by EN 60079-0:2012 and IEC 60079-1: 2014 Ed. 7.

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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 01ATEX1073U
Issue 8

Variation 6 - This variation introduced the following change:

- i. The Applicant's name and address was changed from SGX Sensortech (IS) Ltd 2 Hanbury Road, Widford Industrial Estate, Chelmsford, Essex CM1 3AE, UK to SGX Europe Sp. z o.o, Ligocka 103, 40-568 Katowice, Poland.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report No.	Comment
0	27 September 2001	R51A7519A	The release of the prime certificate.
1	21 August 2002	R51A8315A	The introduction of Variation 1.
2	02 December 2004	R52V9860B	Prime certificate re-issued to permit the incorporation of variation 1 dated 21 Aug 02, to change the name of the applicant, correct the description, list new drawings and remove obsolete drawings.
3	18 June 2008	R51A16683B	This Issue covers the following changes: <ul style="list-style-type: none">• All previously issued certification was rationalised into a single certificate, Issue 3, Issues 0 to 2 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.• The introduction of Variation 2.
4	28 January 2011	R24261A/00	The introduction of Variation 3.
5	05 October 2012	R29090A/00	The introduction of Variation 4.
6	10 March 2015	R70004681A R70004681B	The introduction of Variation 5.
7	12 February 2016	R70050289A	The introduction of Variation 6.
8	22 December 2020	R80065177A	This Issue covers the following changes: <ul style="list-style-type: none">• EC-Type Examination Certificate in accordance with 94/9/EC updated to EU-Type Examination Certificate in accordance with Directive 2014/34/EU. (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.)• Transfer of certificate Sira 01ATEX1073U from Sira Certification Service to CSA Group Netherlands B.V..

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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 01ATEX1073U
Issue 8

15 SCHEDULE OF LIMITATIONS

- 15.1 The sensing Head shall be used in conjunction with apparatus providing an intrinsically safe supply having a maximum output power (P_o) not greater than 2.5 W.
- 15.2 When this component is utilised in equipment that is intended to be used in group I applications, it shall be suitably protected to ensure that it will withstand an impact energy in excess of the 7 J low risk of impact value specified in EN 60079-0 clause 26.4.

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 MANUFACTURE

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of CSA Certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

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Certificate Annexe

Certificate Number: Sira 01ATEX1073U
Component: VQ500 Series Gas Sensing Heads
Applicant: SGX Europe Sp. z o.o.



Issue 0

Drawing	Sheet	Rev.	Date	Title
FM532571A	1 of 1	5	07 Sep 01	Sintered Disc Assembly
FM532571B	1 of 1	4	07 Sep 01	Sintered Disc Assembly
FM532571C	1 of 1	3	07 Sep 01	Sintered Disc Assembly
FM532571D	1 of 1	3	07 Sep 01	Sintered Disc Assembly
FM543262A	1 of 1	4	07 Sep 01	400 & 500 Series Gas Sensors General Assembly Build Standard 'A'
FM543263A	1 of 1	4	07 Sep 01	400 & 500 Series Gas Sensors General Assembly Build Standard "B"
FM543379A	1 of 1	3	07 Sep 01	400 & 500 Series Gas Sensors General Assembly Build Standard "C"
FM544141A	1 of 1	4	07 Sep 01	400 & 500 Series Gas Sensors General Assembly Build Standard "D"
H543679A	1 of 1	A	13 May 96	Pin
N24106R	1 of 1	3	22 Jun 01	Label

Issue 1

Drawing	Sheet	Rev	Date	Description
N24106R	1 of 1	4	18 Jul 02	Label

Issue 2

Drawing	Sheet	Rev	Date	Description
FM532571D	1 of 1	5	20 Mar 03	Sintered disc assembly
FM543263A	1 of 1	6	14 Sep 04	General assembly build standard B
FM543379A	1 of 1	5	14 Sep 04	General assembly build standard C
H532608B	1 of 1	3	14 Mar 03	Pin
N24106R	1 of 1	7	-	Label

Issue 3

Drawing	Sheet	Rev	Date	Description
FM532571D	1 of 1	6	03 Dec 04	Sintered Disc Assembly
N24106R	1 of 1	10	12 Jun 08	Label

The following drawings were withdrawn at this issue:

Drawing	Sheet	Rev	Date	Description
FM532571A	1 of 1	5	07 Sep 01	Sintered Disc Assembly
FM532571B	1 of 1	4	07 Sep 01	Sintered Disc Assembly
FM532571C	1 of 1	3	07 Sep 01	Sintered Disc Assembly
FM543262A	1 of 1	4	07 Sep 01	400 & 500 Series Gas Sensors General Assembly Build Standard 'A'
FM544141A	1 of 1	4	07 Sep 01	400 & 500 Series Gas Sensors General Assembly Build Standard "D"

Issue 4

Drawing	Sheet	Rev	Date (Sira stamp)	Description
N24106R	2 of 2	11	26 Jan 11	Label
FM543263A	1 of 1	7	26 Jan 11	VQ 500 Series Gas Sensors General Assembly Build Standard B
FM543379A	1 of 1	6	26 Jan 11	VQ 500 Series Gas Sensors General Assembly Build Standard C

Issue 5

Drawing	Sheet	Rev	Date (Sira stamp)	Description
LBL - 0004	1 to 2	1	05 Oct 12	VQ500 Label

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Certificate Number: Sira 01ATEX1073U
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Issue 6

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
LBL-0004	1 to 2	2	25 Feb 15	VQ500 Series Laser Marked Body

Issue 7

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
LBL-0004	1 to 2	3	03 Dec 15	VQ500 ATEX & IEC Certified Label

Issue 8 – No new drawings were introduced.

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