



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 10ATEX2204** Issue: **7**

4 Equipment: **X005 3-Port Galvanic Isolation Amplifier**

5 Applicant: **Positek a division of Variohm Eurosensor Ltd.**

6 Address: **Hermes House
Andoversford Link
Andoversford
Cheltenham, GL54 4LB
UK**

7 This equipment 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 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:

EN IEC 60079-0:2018 EN 60079-11:2012

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-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:



I (M1)
[Ex ia Ma] I

Ta = -20°C ≤ Ta ≤ +60°C



II (1)GD
[Ex ia Ga] IIC
[Ex ia Da] IIIC

Ta = -20°C ≤ Ta ≤ +60°C



Signed: Michelle Halliwell

Title: Director of Operations

Project Number 80192704

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The X005 3-Port Galvanic Isolation Amplifier is designed to restrict the transfer of energy, from unspecified safe area equipment to intrinsically safe circuits, by the limitation of voltage and current. The unit comprises a single printed circuit board housed in a plastic enclosure which may be clipped to a DIN rail. Hazardous and safe area connections are made via two sets of two three-way terminal connectors on the top of the unit. The printed circuit board contains isolating transformers, fuses, zener diodes and current limiting resistors together with other electronic components.

The circuit connected to the safe area terminals V+ & 0V is designed to operate from a d.c. supply voltage of up to 35V. Outputs O/P+ and O/P- are designed to drive a nominal 0 to 10 Volts or 4 to 20mA load.

Terminal J3:1, J3:3, J4:1 and J4:3	Terminals J1:2, J1:3, J2:2, J2:1, J1:1															
Um = 253 V	Uo = 10.66 V Io = 50.5 mA Po = 121 mW															
	<table border="1"> <thead> <tr> <th>Group</th> <th>IIC</th> <th>IIB</th> <th>IIA</th> <th></th> </tr> </thead> <tbody> <tr> <td>Co =</td> <td>2.23</td> <td>15.6</td> <td>69.0</td> <td>µF</td> </tr> <tr> <td>Lo =</td> <td>14</td> <td>53</td> <td>112</td> <td>mH</td> </tr> </tbody> </table>	Group	IIC	IIB	IIA		Co =	2.23	15.6	69.0	µF	Lo =	14	53	112	mH
Group	IIC	IIB	IIA													
Co =	2.23	15.6	69.0	µF												
Lo =	14	53	112	mH												

Variation 1 - This variation introduced the following changes:

- i. The certificate holder and manufacturer's name was changed:

From:	To:
Positek Limited	Positek a division of Variohm Eurosensor Ltd.
- ii. The body responsible for quality was changed from 0518 to 2813 as shown on the label drawings

Variation 2 - This variation introduced the following changes:

- i. Revise nameplate drawing X005-12 to add UKCA certificate information.
- ii. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2006 and EN 60079-11:2007 were replaced by EN IEC 60079-0:2018 and EN 60079-11:2012, the markings in section 12 were updated accordingly

Variation 3 - This variation introduced the following change:

- i. Updated Enclosure.

Variation 4 - This variation introduced the following change:

- i. To permit a Zener diode to be a generic type.



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Variation 5 - This variation introduced the following change:

- i. Change of Applicants additional manufacturing location name and address as follows:
From: Positek a Division of Variohm Eurosensor Ltd, L6 Andoversford link, Andoversford Industrial estate, Andoversford, Cheltenham, Gloucester, GL54 4LB
To; Positek a Division of Variohm Eurosensor Ltd, Hermes House, Andoversford Link, Andoversford, Cheltenham, GL54 4LB

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	21 September 2010	R21492A/00	The release of the prime certificate.
1	20 December 2011	R21492A/01	Issued to allow Sira R21492A/01 to replace Sira R21492A/00
2	15 October 2019	2423	<ul style="list-style-type: none">• Transfer of certificate Sira 10ATEX2204 from Sira Certification Service to CSA Group Netherlands B.V.• 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>
3	19 October 2021	R80096394A	The introduction of Variation 1.
4	30 March 2022	R80104399A	The introduction of Variation 2.
5	04 August 2022	R80103387A	The introduction of Variation 3.
6	03 October 2022	R80140959A	The introduction of Variation 4.
7	12 January 2024	R80192704A	The introduction of Variation 5.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

None.

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 Group Netherlands B.V. certificates.

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- 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.
- 17.3 The non-mains transformer, TR01, is subject to routine tests at voltages of 1506V (1000V+2U with $U_m=253V$): between the input winding and the intrinsically safe circuit output windings, between the safe side output winding and the intrinsically safe circuit output windings, in accordance with clause 11.2 of EN 60079-11: 2012.
- 17.4 The non-mains signal transformer, TR02, is subject to routine tests at voltages of 1016V rms between I.S input windings and the output windings, in accordance with clause 11.2 of EN 60079-11: 2012.

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Certificate Annexe



Certificate Number: Sira 10ATEX2204
Equipment: X005 3-Port Galvanic Isolation Amplifier
Applicant: Positek a division of Variohm Eurosensor Ltd.

Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
EX05-59	1 of 2	A	16 Sep 10	Galvanic Isolation Barrier – Input Power
EX05-59	2 of 2	A	16 Sep 10	Galvanic Isolation Barrier – Input/Output Power
X005-20	1 to 6	G	16 Sep 10	Galvanic Isolation Barrier – Parts List
TR01-10	1 & 2	C	16 Sep 10	TR01 Specification
TR02-10	1 & 2	C	16 Sep 10	TR02 Specification
X005-13	1 of 1	A	16 Sep 10	Connector Coding
X005-12	1 of 1	B	16 Sep 10	Case Artwork

Issue 1

Drawing	Sheets	Rev.	Date (Stamp)	Title
X005-12	1 of 1	C	20 Dec 11	Case Artwork

Issue 2 - No new drawings were introduced

Issue 3

Drawing	Sheets	Rev.	Date (Stamp)	Title
X005-12	1 of 1	E	20 Aug 21	Galvanic Isolation Amplifier – Case Artwork

Issue 4

Drawing	Sheets	Rev.	Date (Stamp)	Title
X005-12	1 of 1	F	10 Feb 22	Galvanic Isolation Amplifier – Case Artwork
X005-20	1 to 6	H	04 Mar 22	Galvanic Isolation Barrier – Parts List

Issue 5. No new drawings were introduced as the changes are found in drawing X005-20 Rev H previously submitted.

Issue 6

Drawing	Sheets	Rev.	Date (Stamp)	Title
X005-20j	1 to 9	J	22-Sep-22	Galvanic Isolation Barrier – Parts List

Issue 7. No new drawings were introduced.

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