



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 13ATEX2371X** Issue: **0**

4 Equipment: **Series EX07 Position Sensor**

5 Applicant: **Positek Ltd.**

6 Address: **L6 Andoversford link
Andoversford Industrial estate
Andoversford Cheltenham
Gloucester GL54 4LB**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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 60079-0:2012/A11:2013 EN 60079-11:2012 EN 60079-26:2007

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EC 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:

Model E



II 1 GD
Ex ia IIC T4 Ga
Ex ia IIIC T135°C Da
Ta = -40°C to 80°C

Model X



II 1 G
Ex ia IIC T4 Ga
Ta = -40°C to 80°C

Model M



II 1 GD
I M1
Ex ia IIC T4 Ga
Ex ia IIIC T135°C Da
Ex ia I Ma
Ta = -40°C to 80°C

Project Number 31630

C Ellaby
Deputy Certification Manager

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

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13 DESCRIPTION OF EQUIPMENT

The Series EX07 Position Sensors comprises of a range of Rotary and Linear inductive position sensors. Each sensor incorporates the Positek EX07 Electronics System, which is used to excite the coils.

The electronic components are mounted on a printed circuit board and the sensing coils are either configured on a printed wiring board or wound onto a former.

The apparatus utilises an enclosure into which the electrical components are located. The enclosure construction varies as follows:

- Model series X and E, metal or plastic and metal enclosure of at least ingress protection level IP20 for Groups II & III;
- Model series M, metal enclosure of at least ingress protection level IP54 for Group I.

The apparatus is to be powered via a suitably-certified isolator. The EX07 has the following entity parameters:

Parameter	Value
Ui	11.4 V
Ii	0.2 A
Pi	0.51 W
Ci without integral cable	1.16 uF
Ci with integral cable (Max. length)	1.36 uF (1000 m)
Li without integral cable	50 uH
Li with integral cable (Max. length)	860 uH (1000 m)

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	04 April 2014	R31630A/00	The release of the prime certificate.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

15.1 The apparatus does not meet the 500 V r.m.s dielectric strength test between circuit and frame, in accordance with clause 6.3.13 of IEC 60079-11:2011. This must be taken into consideration on installation.

15.2 When using a Sensor that has an integral cable in a dust application, the free end of the cable shall be appropriately terminated for the zone of use.

15.3 Maximum permitted cable parameters:

- Capacitance $\leq 200\mu\text{F/m}$;
- Inductance $\leq 0.81\mu\text{H/m}$;
- Length $\leq 1000\text{m}$.

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Sira Certification Service

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- 15.4 Under certain extreme circumstances, the non-metallic and isolated metal parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. This is particularly important if the equipment is installed in a zone 0 location. In addition, the equipment shall only be cleaned with a damp cloth.
- 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 CERTIFICATION**
- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

Certificate Annexe

Certificate Number: Sira 13ATEX2371X
Equipment: Series EX07 Position Sensor
Applicant: Positek Ltd



Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
EX02-59B	1 of 1	B	17-Dec-13	Sensor board plus external feed-through capacitors (Circuit diagram)
LB24-10a	1 of 1	A	25-Mar-14	Product label for intrinsically safe sensors Gas/dust/mining (Label drawing)
M000-03a	1 to 8	A	17-Dec-13	Typical construction details for M series sensors (Mining)
EX07-20B	1 to 4	B	07-Mar-14	System Parts List For Intrinsically Safe Products

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