1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 04ATEX2302X** Issue: **3**

4 Equipment: **IS-L101L Beacon**

5 Applicant: **European Safety System Limited**

6 Address: Impress House
Mansell Road
Acton
London W3 7QH
UK

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 60079-0:2006 EN 60079-11:2007 EN 60079-26:2007
IEC 60079-0:2007 (used for guidance in respect of marking)

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:

II 1 G
Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +60°C)

Project Number 20910
C. Index 15

C Ellaby
Certification Officer

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13 **DESCRIPTION OF EQUIPMENT**

The IS-L101L Beacon is designed to provide a flashing warning when activated. It consists of two printed circuit board assemblies, one containing the main circuit and the other several LEDs. These are mounted inside an IP 66, flame retardant, ABS enclosure that is fitted with a transparent polycarbonate 'lens'. Two, alternative LED boards may be fitted, each being fitted with different types of LED. External connections are made to terminals mounted on the main printed circuit board via cable entry devices mounted in the walls of the enclosure.

Terminal + w.r.t. Terminal -	U_i	=	28 V
	I_I	=	660 mA
	P_i	=	1.2 W
	C_i	=	0
	L_i	=	0
Terminal S+ w.r.t. Terminal S -	U_o	=	16.8 V
	I_o	=	660 mA
	P_o	=	1.2 W

The parameters above are based on Terminal + being considered internally electrically connected to Terminal S+ via internal voltage clamping zener diodes of maximum voltage 16.8V and Terminal - being considered internally electrically connected to Terminal S –.

Terminals Ac.Sw	U_o	=	16.8V
	I_o	=	3.61 mA
	P_o	=	15.2 mW

Variation 1 - This variation introduced the following changes:

i. Following appropriate re-assessment to demonstrate compliance with the requirements of the latest standards, the documents originally listed in section 9, EN 50014: 1997 + A1 and A2, EN 50020: 2002 and EN 50284: 1999, were replaced by those currently listed, the markings in section 12 were updated accordingly.

ii. The IS-L101L Beacon was changed to modify the PCB track and component layout.

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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	24 November 2004	R52A12120A	The release of the prime certificate.
1	14 October 2005	R52A14095A	Issued to introduce the changes described in report number R52A14095A.
2	18 August 2006	R52A15304A	Issued to introduce the changes described in report number R52A15304A
3	23 November 2009	R20910A	This Issue covers the following changes: • 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 1.

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

15.1 The enclosure is non-conducting and may generate an ignition-capable level of electrosatic charges under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions that might cause a build-up of electrostatic charges on non-conducting surfaces, additionally, cleaning of the equipment should be done only with a damp cloth.

15.2 The equipment has an ingress protection rating of IP 66. However, if it has been supplied without cable entry devices, then the user shall ensure that the devices that are fitted will provide an ingress protection that is appropriate to the environment in which it is installed i.e. IP20 or better. If only one of the two cable entries are used, then the unused entry shall be fitted with a blanking device that ensures ingress protection appropriate to the environment in which it is installed i.e. IP20 or better.

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.

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Certificate Annexe

Certificate Number: **Sira 04ATEX2302X**

Equipment: **IS-L101L Beacon**

Applicant: **European Safety System Limited**

Issue 0 to 2 (The drawings listed with these Issues were rationalised and superseded by those detailed in Issue 2)

Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
CD 4621	1 of 1	A	03 Dec 04	Circuit Diagram
PL 4621	1 of 1	A	03 Dec 04	Parts List
D 4621	1 of 1	A	03 Dec 04	General Arrangement
D 4622	1 of 1	C	02 May 06	Certification Label - ATEX
D 4623	1 of 1	A	07 Dec 04	Printed Circuit Board
D 4628	1 of 1	C	17 Feb 06	Certification Label ATEX/IECEx/FM

Issue 3

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
D 4628	1 of 1	D	11 Nov 09	IS-L101L Beacon Label (ATEX, IECEx, FM)
D 4623	1 of 1	B	11 Nov 09	Printed Circuit Board

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