IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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Certificate No.: **IECEx SIR 04.0039X**

Status: **Current**

Issue No: 6

Date of Issue: 2026-03-02

Certificate history:
Issue 5 (2019-09-05)
Issue 4 (2015-02-23)
Issue 3 (2013-10-31)
Issue 2 (2013-08-08)
Issue 1 (2009-11-26)
Issue 0 (2006-04-24)

Applicant: **European Safety Systems Ltd**
Impress House
Mansell Road
Acton
London W3 7QH
United Kingdom

Equipment: **IS-L101L Beacon and IS-DL105 Sounder/Beacon**

Optional accessory:

Type of Protection: **Intrinsic safety "ia"**

Marking:

For IS-L101L Beacon	**For IS-DL105 Sounder/Beacon**
Ex ia IIC T4 Ga	Ex ia IIC T4 Ga
Ex ia I Ma	(-40°C ≤ Ta ≤ +60°C)
(-40°C ≤ Ta ≤ +60°C)	

Approved for issue on behalf of the IECEx Certification Body: **Michelle Halliwell**

Position: **Senior Director of Operations**

Signature:
(for printed version)

Date:
(for printed version)

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 www.iecex.com or use of this QR Code.

Certificate issued by:

CSA Group Testing UK Ltd
Unit 6, Hawarden Industrial Park
Hawarden, Deeside CH5 3US
United Kingdom

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Manufacturer: **European Safety Systems Ltd**
Impress House
Mansell Road
Acton
London W3 7QH
United Kingdom

Manufacturing locations: **European Safety Systems Ltd**
Impress House
Mansell Road
Acton
London W3 7QH
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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 equipment 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2023 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:7.0

This Certificate **does not** indicate compliance with 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 Reports:

GB/SIR/ExTR06.0038/00
GB/SIR/ExTR09.0189/00
GB/SIR/ExTR13.0136/00
GB/SIR/ExTR13.0281/00
GB/SIR/ExTR15.0023/00
GB/SIR/ExTR19.0235/00
GB/SIR/ExTR26.0022/00

Quality Assessment Report:

GB/SIR/QAR06.0020/13

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

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 in an IP66, flame retardant ADS that is fitted with a transparent polycarbonate 'lens'. One of two alternative LED boards may be fitted, each having different types of LED mounted. External connections are made to terminals mounted on the main printed circuit board via cable entry devices mounted in the walls of the enclosure. The equipment has the following parameters:

Terminal "+" w.r.t. Terminal "- "	**Terminal "S+" w.r.t. Terminal "S–"**
Ui = 28 V	Uo = 16.8 V
Ii = 660 mA	Io = 660 mA
Pi = 1.2 W	Po = 1.2 W
Ci = 0	
Li = 0	

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

Terminals "Ac.Sw"

Uo = 16.8 V

Io = 3.61 mA

Po = 15.2 mW

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The enclosure of the IS-L101L Beacon is non-conducting and may generate an ignition-capable level of electrostatic 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.

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.

3. The enclosure of the IS-DL105 Sounder/Beacon is manufactured from cast aluminium. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation, particularly if the equipment is installed in an area requiring Equipment Protection Level Ga.

4. When the IS-DL105 Sounder/Beacon is powered via two separate barriers, they shall be installed as separate intrinsically safe circuits; the Sounder shall not be electrically connected to the Beacon and they shall not share a common return line.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1 – this Issue introduced the following changes:

1. Following appropriate re-assessment to demonstrate compliance with the requirements of the latest standards, the documents originally listed in section 9, IEC 60079-0:2000 Edition 3.1 and IEC 60079-11:1999 Edition 4, were replaced by those currently listed, the markings were updated accordingly.
2. The IS-L101L Beacon was changed to modify the PCB track and component layout.

Issue 2 - this Issue introduced the following changes:

1. The use of a cast aluminium enclosure material and an alternative to the existing plastic material was approved. The conditions of Certification are amended to reflect this change.

Issue 3 - this Issue introduced the following changes:

1. It was clarified that the cast aluminium enclosure versions that were first recognised in Issue 2 of this certificate are in fact the model IS-DL105 Combined Sounder/Beacon; to account for the new model, the Conditions of Certification and associated drawings were reviewed and revised accordingly. The IS-DL105 is described in the Certificate Annexe.

Issue 4 - this Issue introduced the following changes:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, the documents previously listed, IEC 60079-0:2004 Ed 4.0, IEC 60079-11:2006 Ed 5.0 and IEC 60079-26:2006 were replaced by IEC 60079-0:2011 Ed 6, IEC 60079-11:2011 Ed 6 and IEC 60079-26:2014 Ed 3.0.

Issue 5 - this Issue introduced the following changes:

1. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, the document previously listed, IEC 60079-0:2011 Edition 6.0 was replaced by IEC 60079-0:2017 Edition 7.0.
2. IEC 60079-26:2014-10 Ed 3.0 was removed as IEC 60079-26 is not applicable to Ex ia Ga equipment.

Issue 6 - this Issue introduced the following changes:

1. Upgrade to the latest standard: IEC 60079-11:2023 Ed. 7.
2. Addition of EPL Ma assessment for the Model IS-L101L.

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Additional information:

Conditions of Manufacture

The Manufacturer shall comply with the following:

1. Verification of conformal coating around capacitor C1 area, specified in a drawing number D4524 shall be conducted. There shall be no evident damage on the conformal coating, this includes but is not limited to;
   - Cracks;
   - non-homogeneous covering of the encapsulated or coated parts;
   - inadmissible shrinkage;
   - swelling;
   - decomposition;
   - failure of adhesion (separation of any adhered parts) or flaking; and
   - softening.

Alternative procedure:
Routine verification may be replaced by batch verification where there is confidence in the manufacturing process, in which case the following criteria based on ISO 2859-1 shall apply:
   - For a production batch up to 100, a sampling of 8 shall be inspected with no failures
   - For a production batch from 101 to 1 000, a sampling of 32 shall be inspected with no failure
   - For a production batch from 1 001 up to 10 000, a sampling of 80 shall be inspected with no failures
   - Batches above 10 000 shall be subdivided into smaller batches

If there are any non-compliant inspection results, 100 % of all remaining samples in the batch shall be inspected. Future batches shall be routinely inspected until confidence is established to reconsider batch verification.

Annex:

IECEx SIR 04.0039X Iss 6 Annexe.pdf

The IS-DL105 Sounder/Beacon is designed to provide an audible and flashing warning when activated. It consists of three printed circuit board assemblies, one for the sounder, connected to an inductive sounder transducer; and two printed circuit board assemblies for the beacon, one containing the main circuit and the other several LEDs.

These are mounted in an IP 66, cast aluminium enclosure with a borosilicate glass dome. External connections are made to terminals mounted on the printed circuit board via a cable entry device mounted in the wall of the enclosure.

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.

Sounder and Beacon powered through a single barrier		
The barrier may be connected either to the Sounder or to the Beacon, as shown below:		
Sounder PCBA	**OR**	Beacon PCBA
Input to Terminals + w.r.t. Terminal:		Input to Terminals + w.r.t. Terminals -:
Ui = 28 V Ii = 93 mA Pi = 660 mW Ci = 0 Li = 0		Ui = 28 V Ii = 93 mA Pi = 660 mW Ci = 0 Li = 0
In addition, a diode return barrier or isolator may be connected to Terminal S2 w.r.t. Terminal – and Terminal S3 w.r.t. Terminal – with the following parameters: Ui = 28 V Ii = 0		The output parameters at Terminal S+ w.r.t. Terminal S- are: Uo = 16.8 V Io = 93 mA Po = 660m W These 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 -.
		The output parameters at Terminals Ac.Sw are: Uo = 16.8 V Io = 3.61 mA Po = 15.2 mW

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Sounder and Beacon powered through two separate barriers		
One barrier may be connected to the Sounder and a second to the Beacon, as shown below. The Sounder and Beacon shall be regarded as separate intrinsically safe circuits and shall not be electrically connected to each other.		
Sounder PCBA	**AND**	Beacon PCBA
Input to Terminals + w.r.t. Terminal -:		Input to Terminals + w.r.t. Terminals -:
Ui = 28 V Ii = 93 mA Pi = 660 mW Ci = 0 Li = 0		Ui = 28 V Ii = 660 mA Pi = 1.2 W Ci = 0 Li = 0
In addition, a diode return barrier or isolator may be connected to Terminal S2 w.r.t. Terminal – and Terminal S3 w.r.t. Terminal – with the following parameters: Ui = 28 V Ii = 0		The output parameters at Terminal S+ w.r.t. Terminal S- are: Uo = 16.8 V Io = 660 mA Po = 1.2 W These 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 -.
		The output parameters at Terminals Ac.Sw are: Uo = 16.8 V Io = 3.61 mA Po = 15.2 mW

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