



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 04ATEX2301X** Issue: **6**

4 Equipment: **IS-A105N and IS-D105 Sounders**

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 31828

C Ellaby  
Deputy Certification Manager

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## SCHEDULE

### EC TYPE-EXAMINATION CERTIFICATE

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#### 13 DESCRIPTION OF EQUIPMENT

The IS-A105N Sounder is designed to provide an audible warning when activated. It consists of a printed circuit board assembly and an inductive sounder transducer; these are mounted in an IP 66, flame retardant, ABS enclosure. External connections are made to terminals mounted on the printed circuit board via a cable entry device mounted in the wall of the enclosure.

##### Terminals + w.r.t. Terminals

$U_i = 28\text{ V}$        $I_i = 93\text{ mA}$        $P_i = 660\text{ mW}$        $C_i = 0$        $L_i = 0$

The equipment shall only be supplied from a barrier having a resistively limited current output.

##### Terminals S2 and S3 w.r.t. Terminal

$U_i = 28\text{ V}$        $I_i = 0$

**Variation 1** - This variation introduced the following change:

- 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.

**Variation 2** - This variation introduced the following change:

- i. The use of a cast aluminium enclosure material as an alternative to the existing plastic material was approved. The Special conditions for Safe Use are amended to reflect this change.

**Variation 3** - This variation introduced the following changes:

- i. It was clarified that the cast aluminium enclosure versions that were first recognised in Variation 2 Issue 5 of the certificate are known as the model IS-D105 Sounder thereby differentiating them from the original model IS-A105N which has a plastic enclosure; it should be noted that the safety parameters applied to IS-D105 are the same as that for the IS-A105N as specified in the Description of Equipment, however, to account for the new model, the Special Conditions for Safe Use were reviewed and revised accordingly.
- ii. Drawing D187-00-201-SC was previously listed in error in Issue 5 of the certificate and was therefore removed.

#### 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	R52A11977A	The release of the prime certificate.
1	20 December 2004	R52V12839A	Issued to introduce the changes described in report number R52V12839A.

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Issue	Date	Report no.	Comment
2	15 November 2005	R52A14305A	Issued to introduce the changes described in report number R52A14305A.
3	23 August 2006	R52A15304A	Issued to introduce the changes described in report number R52A15304A
4	23 November 2009	R20910A	This Issue covers the following changes: <ul style="list-style-type: none"><li>All previously issued certification was rationalised into a single certificate, Issue 4, Issues 0 to 3 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format.</li><li>The introduction of Variation 1.</li></ul>
5	08 August 2013	R28860A/00	The introduction of Variation 2.
6	31 October 2013	R31828A/00	The introduction of Variation 3.

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

- 15.1 The equipment shall only be supplied via Terminals + w.r.t. Terminals – from a barrier having a maximum open circuit voltage  $U_o$  that is  $\leq 28$  V and a maximum short circuit current  $I_o$  that is  $\leq 93$  mA, where  $I_o$  is resistively limited. The barrier shall be ATEX certified by a notified body.
- 15.2 The total capacitance connected to terminals + wrt – (i.e. the capacitance of the cable plus any other capacitance) shall not exceed 83 nF.
- 15.3 The enclosure of the IS-A105N Sounder 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.
- 15.4 The equipment has an ingress protection rating of IP66; however, if it has been supplied without a cable entry device, then the user shall ensure that the device that is fitted will provide an ingress protection that is appropriate to the environment in which it is installed i.e. IP20 or better.
- 15.5 The enclosure of the IS-D105 Sounder 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.

#### 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 04ATEX2301X  
Equipment: IS-A105N and IS-D105 Sounders  
Applicant: European Safety System Limited



**Issue 0 to 2** (The drawings listed with these Issues were rationalised and superseded by those detailed in Issue 3)

## Issue 3

Drawing No.	Sheet	Rev.	Date	Description
CD 4521	1 of 1	A	02 Nov 04	Circuit Diagram
PL 4521	1 of 1	A	02 Nov 04	Parts List
D 4521	1 of 1	A	27 Oct 04	General Arrangement
D 4523	1 of 1	A	27 Oct 04	Certification Label ATEX
D 4524	1 of 1	A	25 Oct 04	Printed Circuit Board
D 4525	1 of 1	A	01 Nov 04	Sounder Transducer
D 4529	1 of 1	B	13 Jul 06	Certification Label – ATEX/IECEX/FM

## Issue 4

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
D 4529	1 of 1	C	11 Nov 09	IS A105N Sounder Label (ATEX, IECEX, FM)

## Issue 5

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
D187-00-001-SC	1 of 1	A	08 May 13	IS-D105 Sounder GA

Drawing D187-00-201-SC was previously listed in error and was removed.

## Issue 6

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
D187-99-001-SC	1 of 1	A	07 Oct 13	IS-D105 Sounder – Label

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