Australian/New Zealand
Certification Scheme for
EXPLOSION-PROTECTED ELECTRICAL EQUIPMENT
ANZEx Scheme

Certificate of Conformity

Certificate No.: **ANZEx 07.4044X**	Issue No.: **0**	Date of Issue: **31 August 2007**

Certificate Holder:

European Safety Systems Limited
Impress House
Mansell Road Acton
London W3 7QH
UK

Electrical Apparatus:

IS-mA1AN Sounder, IS-mB1AN Beacon & IS-mC1AN Combined Sounder/Beacon.

Type of Protection:

Ex ia IICT4 (-40°C <= Ta <= +60°C) IP65

Marking Code:

Ex ia IICT4 (-40°C <=Ta<= +60°C)
ANZEx 07.4044X

Manufacturing Location(s):

European Safety Systems Limited
Impress House
Mansell Road Acton
London W3 7QH
UK

ITACS®

ABN *06 098 886 563*

Certificate issued by

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JAS-ANZ

Accreditation by the Joint Accreditation System of Australia and New Zealand

Acc No. Z2870404AA

www.jas-anz.com.au\register

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*This certificate is granted subject to the conditions as set out in Standards Australia/Standards New Zealand Miscellaneous Publication **MP87**.*

STANDARDS:

The electrical apparatus 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: Edition 3.1	Electrical equipment for explosive atmospheres- Part 0: General requirements
IEC 60079-11: 4th Edition	Electrical apparatus for explosive gas atmospheres- Part 11: Intrinsic safety

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

The equipment listed has successfully met the examination and test requirements as recorded in

Test Report No. and Issuing Body: **SIRA IECEx ExTR (GB/SIR/ExTR06.0103/00)**
Quality Assessment Report No. and Issuing Body: **SIRA IECEx GB/SIRA SIRA Ref 55A/15395**

File Reference: ANZ Ex 07.4044X

Signed for and on behalf of issuing body

Certification Authority — 31 August 2007

Position — *Date of Issue*

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Schedule

EQUIPMENT:

The **IS-mA1AN Sounder** is designed to provide an audible warning when activated. It consists of the following mounted in an IP 65, flame retardant, ABS enclosure:
· Sounder printed circuit board assembly
· Inductive sounder transducer

External connections are made to terminals mounted on the sounder printed circuit board via cable entry devices mounted in the wall of the enclosure.

The **IS-mB1AN Beacon** is designed to provide a flashing warning when activated. It consists the following mounted inside an IP 65, flame retardant, ABS enclosure that is fitted with a transparent polycarbonate 'lens':
· Beacon main printed circuit board assembly
· Beacon LED printed circuit board assembly

External connections are made to terminals mounted on the beacon main printed circuit board via cable entry devices mounted in the walls of the enclosure.

The **IS-mC1AN Combined Sounder/Beacon** is designed to provide an audible and a flashing warning when activated. It consists of the following mounted inside an IP 65, flame retardant, ABS enclosure that is fitted with a transparent polycarbonate 'lens':
· Sounder printed circuit board assembly
· Inductive sounder transducer
· Beacon main printed circuit board assembly
· Beacon LED printed circuit board assembly

External connections are made to terminals mounted on the sounder printed circuit board assembly and the beacon main printed circuit board assembly via cable entry devices mounted in the walls of the enclosure. The IS-mC1 Combined Sounder/Beacon may be supplied with internal wiring connections between Sounder Terminals + / - and Beacon Terminals + / -, alternatively these connections may be fitted by the user/installer.

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CONDITIONS OF CERTIFICATION:

IS-mA1AN Sounder

1 The equipment has an ingress protection rating of IP65. 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 'knockout' shall be left intact or fitted with a blanking device that ensures ingress protection appropriate to the environment in which it is installed i.e. IP20 or better.

2. The total capacitance connected to Terminal + w.r.t. Terminal – (i.e. the capacitance of the cable plus any other capacitance) shall not exceed 83nF.

3. The equipment shall not be directly installed in any process where its enclosure might be electro-statically charged by the rapid flow of a non-conductive media.

4. The equipment shall only be supplied via Terminal + w.r.t. Terminal – from a barrier having a maximum open circuit voltage Uo that is ≤ 28V and a maximum short-circuit current Io that is ≤ 93mA, where Io is resistively limited.

5. The following entity parameters apply to the IS-mA1AN Sounder

Terminals	**Parameters**				
-	U_i	I_i	P_i	C_i	L_i
Terminal + wrt -	28 V	93 mA	660 mW	Negligible	Negligible
Terminal S2 & S3 wrt -	28 V	0	-	-	-

IS-mB1AN Beacon

1. The equipment has an ingress protection rating of IP65. 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 'knockout' shall be left intact or fitted with a blanking device that ensures ingress protection appropriate to the environment in which it is installed i.e. IP20 or better.

2. The equipment shall not be directly installed in any process where its enclosure might be electro-statically charged by the rapid flow of a non-conductive media.

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CONDITIONS OF CERTIFICATION (continued):

3. The following entity parameters apply to the **IS-mB1AN Beacon**

Terminals	**Parameters**				
-	U_i	I_i	P_i	C_i	L_i
Terminal + wrt -	28 V	660 mA	1.2 W	Negligible	Negligible

IS-mC1AN Combined Sounder/Beacon

1. The equipment has an ingress protection rating of IP65. 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 'knockout' shall be left intact or fitted with a blanking device that ensures ingress protection appropriate to the environment in which it is installed i.e. IP20 or better.
2. The total capacitance connected to Sounder Terminal + w.r.t. Terminal – (i.e. the capacitance of the cable plus any other capacitance) shall not exceed 83nF.
3. The equipment shall not be directly installed in any process where its enclosure might be electro-statically charged by the rapid flow of a non-conductive media.
4. The equipment shall only be supplied via Sounder Terminal + w.r.t. Sounder Terminal – from a barrier having a maximum open circuit voltage Uo that is $\leq$ 28V and a maximum short-circuit current Io that is $\leq$ 93mA, where Io is resistively limited.
5. If not already fitted, optional internal wiring connections between Sounder Terminals + / - and Beacon Terminals + / - may be fitted by the user. The wiring used for such connections shall have a minimum radial thickness of insulation of 0.5mm.

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CONDITIONS OF CERTIFICATION (continued):

6. The following entity parameters apply to the IS-mC1AN Combined Sounder/Beacon

	Terminals	**Parameters**				
	-	U_i	I_i	P_i	C_i	L_i
Without internal connections	Sounder Terminal "+" wrt Sounder "-"	28 V	93 mA	660mW	Negligible	Negligible
	Sounder Terminal S2 & S3 wrt Sounder "-"	28 V	0	-	-	-
	Beacon Terminal + wrt Beacon "-"	28V	660 mA	1.2 W	Negligible	Negligible
With internal connections	Sounder Terminal "+" wrt Sounder "-"	28 V	93 mA	660mW	Negligible	Negligible
	Sounder Terminal S2 & S3 wrt Sounder "-"	28 V	0	-	-	-

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Manufacturers Drawings:

Drawing #	Title	Rev	Date (YYYY/MM/DD)
CD 5011	IS-mA1 SOUNDER CIRCUIT DIAGRAM	A	2005/05/09
D 5017	IS-mA1 Sounder Basic Assembly	A	2005/08/01
PL 5021	IS-mA1 and IS-mC1 Sounder PCB	A	2005/06/03
D 5021	IS-mA1 and IS-mC1 SOUNDER PCB TRACK AND COMPONENT LAYOUT	A	2005/06/24
D 5048	IS-mA1AN SOUNDER LABEL (ANZEx)	A	2007/07/06
D 5019	IS-mC1 Combined Basic Assembly	A	2005/08/01
D 5050	IS-mA1AN COMBINED LABEL (ANZEx)	A	2007/07/06
CD 5012	IS-mB1 BEACON CIRCUIT DIAGRAM	A	2005/05/09
D 5018	IS-mB1 Beacon Basic Assembly	A	2005/06/03
D 5022	IS-mB1 and IS-mC1 BEACON PCB TRACK AND COMPONENT LAYOUT	A	2005/06/03
PL 5022	IS-mB1 and IS-mC1 Beacon PCB	A	2005/06/03
D 5049	IS-mB1AN BEACON LABEL (ANZEx)	A	2007/07/06
D 4525	IS-A105N SOUNDER TRANSDUCER	A	2004/11/01