1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 14ATEX1328X** Issue: **0**

4 Equipment: **Gassonic SB100 Ultrasonic Tester**

5 Applicant: **General Monitors Ireland Limited**

6 Address: Ballybrit Business Park
Galway
Republic of Ireland

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 EN 60079-1:2007 EN 60079-11:2012 EN 60079-31:2014

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:

II 2GD
Ex d ia IIB+H_2 T4 Gb
Ex ia tb IIIC T135°C Db
Ta = -20°C to +50°C

Project Number 70023734

C Ellaby
Deputy Certification Manager

Sira Certification Service
Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670 900
Fax: +44 (0) 1244 539 301
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org

SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE **Sira 14ATEX1328X**
Issue 0

13 **DESCRIPTION OF EQUIPMENT**

The Gassonic SB100 is a battery operated, rechargeable Ultrasonic Tester that has a rated output of 12 VDC 10 W max. It is specifically designed to test Gassonic Ultrasonic Gas Leak Detectors through a high-energy, ultrasonic radiation source that emits sufficient ultrasonic energy to activate Ultrasonic Gas Leak Detectors. The SB100 is constructed from cast aluminium alloy and incorporates an IS interface board that provides intrinsically safe outputs to the APEM piezo switch used to operate the equipment, a driver board and a nickel metal hydride battery assembly.

The enclosure includes a main housing that provides threaded openings for a 4½-16 UN–2A/2B threaded cover at one end, a M16x1.5 6H/6g threaded brass with nickel plating stopping plug to gain access to a jack plug and an M22x1.5 6H/6g threaded aluminium piezo switch assembly which includes a cemented feed through bushing and an intrinsically safe piezo switch. The enclosure and cover are secured against loosening by a ¼" long #4-40 18-8 stainless steel hex socket screw, the stopping plug by a 10mm hex key, and the piezo switch by the use of a special tool at the manufacturer's facility.

The SB100 tester provides the incorporated intrinsically safe APEM piezo switch, having entity parameters, with intrinsically safe outputs through the cemented bushing. The Um value at the charging socket is set to Um = 14.4VDC.

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report number	Comment
0	04 September 2015	R70023734A	The release of the prime certificate.

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

15.1 The end user shall ensure that the certified stopping plug is installed in the charging port prior to the equipment being used in a hazardous area.

15.2 The equipment shall only be charged using a charger specifically supplied for use with the unit (for example part number FW7300 / MH2-12, manufactured by FRIWO Geraetebau GmbH), approved as SELV or Class 2 equipment against IEC 60950 or IEC 61010-1 or an equivalent IEC standard (or a national standard based on the IEC standard). The maximum voltage from the charger shall not exceed 14.4 Vdc.

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.

Sira Certification Service
Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670 900
Fax: +44 (0) 1244 539 301
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org

SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE **Sira 14ATEX1328X**
Issue 0

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.

17.3 The SB100 equipment incorporates a previously certified intrinsically safe piezo switch assembly by APEM, model number PBAR1AFB000A0BX, which includes an illuminating LED ring. This component is certified within certificate INERIS 07ATEX0043X/02. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification and the manufacturer shall inform Sira of any modifications of the equipment that may impinge upon the intrinsic safety design of the product (including the use of 'equivalents' – different components), as stated in the report tied to the certificate for all safety components.

17.4 The equipment shall be supplied with threaded blanking plugs that have been selected with due regard to the current state of technical knowledge of explosion protection and have been suitably certified for the application.

Sira Certification Service
Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670 900
Fax: +44 (0) 1244 539 301
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org

Certificate Annexe

Certificate Number: **Sira 14ATEX1328X**

Equipment: **Gassonic SB100 Ultrasonic Tester**

Applicant: **General Monitors, Incorporated**

Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
71761	1 to 1	A	02 Sep 15	Battery Pack, 12V NiMH
71700	1 to 1	F	02 Sep 15	SB100, Approval Drawing
71704	1 to 1	D	02 Sep 15	Housing Machined
71705	1 to 1	C	02 Sep 15	Strap Retaining SB100
71707	1 to 1	D	02 Sep 15	SB100 Nameplate
71708	1 to 1	C	02 Sep 15	ASSY, Push Button Switch
71712	1 to 1	B	02 Sep 15	Cover, Ultrasonic Projector
71725	1 to 1	B	02 Sep 15	Bushing Piezo Switch
71730	1 to 1	B	02 Sep 15	Schematic Diagram, SB100 Driver
71731-1	1 to 1	-	02 Sep 15	CCA, SB100, Driver Board BOM
71731	1 to 1	B	02 Sep 15	Circuit Card Assembly, SB100 Driver Board
71733	1 to 2	B	02 Sep 15	Circuit Card Detail, SB100 Driver Board
71740-1	1 to 1	C	02 Sep 15	BOM
71740	1 to 1	C	02 Sep 15	SB100, Subassembly
71742	1 to 1	D	02 Sep 15	Cover, Ultrasonic Projector
71750	1 to 1	A	02 Sep 15	Schematic Diagram, IS Barrier
71751-1	1 to 1	A	02 Sep 15	CCA, SB100, IS Barrier Board BOM
71751	1 to 1	A	02 Sep 15	Circuit Card Assembly, IS Barrier Board
71753	1 to 6	A	02 Sep 15	Circuit Card Detail, SB100 Driver Board
71754	1 to 4	A	02 Sep 15	Artwork, SB100 Driver Board

Sira Certification Service
Unit 6, Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670 900
Fax: +44 (0) 1244 539 301
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org