1 # EC TYPE EXAMINATION CERTIFICATE

2 Equipment or protective system intended for use in potentially explosive atmospheres – Directive 94/9/EC – Annex III

3 EC Type Examination Certificate No.: **TRAC15ATEX0004X**

4 Equipment: **Hand-Held Gas Detector - HXG-2D**

5 Manufacturer: **Sensit Technologies**

6 Address: **851 Transport Drive, Valparaiso, IN 46383 USA**

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 TRaC Global Ltd, Notified Body number 0891 in accordance with Article 9 of the Council 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 or protective system intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential report **TRA-023415-33-00A**.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in section 18 of the schedule to this certificate, has been assured by compliance with:

EN 60079-0:2012 **EN 60079-11:2012**

10 If the sign “X” is placed after the certificate number then this indicates that the equipment or protective system is subject to special conditions of 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 in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of this equipment or protective system shall include the following:

II 2 G Ex ib IIB T3 Gb

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the TRaC Ex Certification Scheme.

S.P. Winsor

S P Winsor, Certification Manager

Issue date: 2015-05-20

Copy No.: 1e

Form RF355 is16A

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13 **SCHEDULE TO EC TYPE EXAMINATION CERTIFICATE**

14 **TRAC15ATEX0004X**

15 **General description of equipment or protective system included within the scope of this certificate**

The model HXG-2D is a portable instrument designed to detect concentrations of combustible gases methane, butane, propane and natural gases. The enclosure is made from conductive polymeric material with a backlit display to show the measured gas concentration. The gas sensor a Figaro, type TGS2611 is located on a flexible gooseneck cable.

The unit is powered by three alkaline C-Size cells. Only one type of the following cells may be used in the instrument:

- Duracell Procell, Type PC1400

The unit has an environmental ingress protection rating of IP20 and must only be used/stored in a clean, dry area.

The device was assessed as ATEX Equipment and the performance aspects of the device were not evaluated as a part of this assessment.

A list of controlled Manufacturer's Documents is given in Appendix A to this schedule.

16 **Test report No.: TRA-023415-33-00A**.

17 **"Special Conditions of Safe Use" for Ex Equipment, if any:**

1. The device shall only be powered by three Duracell Procell Type PC1400 C-Size alkaline batteries.
2. Batteries may only be changed in a non-hazardous area.
3. Do not mix old batteries with new batteries.
4. Figaro, PN TGS2611 Sensor may only be used.
5. Equipment must only be used/stored in an area that is clean and dry.

18 **Essential health and safety requirements**

Covered by application of the standards listed in section 9 of this certificate and the assessment conducted in the test report listed in section 16 of this certificate.

19 **Additional information**

"Routine tests", if any:

1. The inductance and resistance of the speaker must be 100% verified to ensure the inductance does not exceed 278uH and resistance is greater than 7.00 ohms
2. Annually, the resistance of the Fuse (F1/F2/F3) must be verified to ensure it is greater than 0.783 ohms at a temperature of -20°C.

"Special conditions for manufacture", if any:

1. The equipment shall be potted as required in Sensit drawing 730-00029 and drawing 882-00076.
2. All PCBS shall be conformal coated as required in Sensit Drawings 730-00031, 730-00030, and 730-00029.
3. The Figaro Sensor shall be 100% verified to comply with drawing 375-2611-01.
4. The LCD Display must only be Gold Sky, PN GS-8A5703A or Glory Sound, PN GS-12473AA, and must be 100% verified to ensure that it does not contain any embedded IC's, capacitance, and/or inductance

Other information, if any:

None.

Photographs

Details of markings

Details of variations to this certificate

- None

Notes to CE marking

In respect of CE Marking, TRaC Global Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

Notes to this certificate

TRaC certification reference: **TRA-023415-32-00**.

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

APPENDIX A - LIST OF CONTROLLED MANUFACTURER'S DOCUMENTS

Title:	Drawing No.:	Rev. Level:	Date:
Battery Spring (1 Sheet)	110-00007-ATEX	0	2014-11-17
LCD Display For HXG-2D –	160-00001-ATEX	0	2012-07-18
HXG-2d Main PCB (7 Sheets)	170-S2D01-ATEX	5	2013-12-05
HXG-2d Schematic (1 Sheet)	170-S2D01-SCH-ATEX	4	2013-11-15
HXG-2d Connector PCB (5 sheets)	170-S2D05-ATEX	5	2013-12-05
Gooseneck Assy for HXG-2D (1 Sheet)	325-00026-ATEX	0	2014-12-16
Sensor Board Retainer (2 Sheets)	330-00023-ATEX	0	2013-11-22
Battery Clip "Positive" (1 Sheet)	330-00047-ATEX	0	2014-12-16
HXG-2D Battery label (1 Sheet)	340-00013-ATEX	*	2014-12-18
Label Display (3 Sheets) –	340-00014-ATEX	2	2014-02-27
Label Battery Insertion (1 Sheet)	340-00037-ATEX	0	2014-12-16
D.O.M Label (1 Sheet)	340-00041-ATEX	0	2014-12-15
HXG-2D Serial label (1 Sheet)	340-00179-ATEX	*	2015-02-28
Sensor Base HXG-1 (3 sheets)	365-00025-ATEX	0	2013-11-22
Sensor Cap HXG/TKX (No Filter)(3 Sheets)	365-00045-ATEX	0	2013-11-22
Top Housing (Dk. Grey)(11 Sheets)	365-00131-ATEX	0	2013-11-22
Bottom Housing (Dk. Grey)(13 sheets)	365-00132-ATEX	0	2013-11-22
Battery Sleeve (Dk Grey) (2 Sheet)	365-00133-ATEX	0	2013-05-24
Speaker Grill – HXG (2 Sheets)	365-00134-ATEX	0	2013-11-22
Quiet Alarm Cover for HXG-2D (2 Sheets)	365-00135-ATEX	0	2013-11-22
Alarm Knob Cover for HXG-2D (2 sheets)	365-00136-ATEX	0	2013-11-22
Sensor (2611) (7 Sheets)	375-2611-01-ATEX	0	2014-12-15
Conformal coating Control HXG-2D (3 sheets)	730-00029-ATEX	0	2013-09-06
Wire Specification for HXG-2D (3 Sheets)	730-00030-ATEX	0	2014-12-16
Conformal Coating Thickness HXG-2D (1 Sheet)	730-00031-ATEX	0	2013-09-06
Epoxy Conformal Coating Control HXG-2D Interface (3 Sheets)	730-00032-ATEX	0	2013-11-22
Instruction Manual (8 Sheets)	750-00065-ATEX	V1	2015-02-02
Sensit Instrument HXG-2D (7 Sheets)	806-00000-12-ATEX	0	2013-09-06
Bottom Hsg. Assy-HXG-2D (8 sheets)	882-00115-ATEX	0	2013-09-06
HXG-2d main Board leaded Assembly (1 Sheet)	884-S2D01-ATEX	0	2013-09-06
Sensor PCB, HXG-2d Leaded Assembly (1 Sheet)	884-S2D03-ATEX	0	2013-09-06
Interface Board Assy HXG-2D (1 Sheet)	884-S2D05-ATEX	0	2013-09-06
Top Housing Assy – HXG-2d (3 Sheets)	D-HXG-2d-2-ATEX	0	2013-09-06
Bill of Materials (4 Sheets)	HXG-2d ATEX BOM	0	2014-12-10

*no information provided.