



1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 18ATEX2243** Issue: **0**

4 Equipment: **Handheld Toxic Gas Monitor**

5 Applicant: **RAE Systems, Inc. A Honeywell Company**

6 Address: **1349 Moffett Park Drive
Sunnyvale
California 94089
USA**

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 Articles 17 and 21 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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/A11:2013 EN 60079-11:2012

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 Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-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

I M1

Ex ia IIC T4 Ga

Ex ia I Ma

Tamb = -40°C to +60°C

Project Number 70178314

This certificate and its schedules may only be reproduced in its entirety and without change.

C Ellaby
Deputy Certification Manager

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

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 18ATEX2243
Issue 0

13 DESCRIPTION OF EQUIPMENT

The subject instrument is a Handheld Toxic Gas Monitor for continuously display of gas concentrations. The physical dimensions are 70mm*67mm*25 (30mm with 4R sensor) mm. Its weight is around 100g. It is handheld and battery powered, front and back area housed in a transparent plastic material (PC), partially covered with stainless steel and soft thermoplastic rubber material (TPE). The front, which is partially covered with stainless steel, has LCD display and pushbuttons for navigation and programming. The back of the enclosure is equipped with a metallic belt clip.

It is supplied by a Li-SOCI2 battery. The battery is provided with infallible safety circuits including infallible resistors.

This instrument normally equips with electrochemical Clydesdale Whittle sensor / 4R sensor, an optional wireless modem, audible and visual alarm indicators. The visual alarm comprises a Red LED bar visual from the top and bottom. The push button of facilitates the access to measured levels or alarms, and the mode button makes it possible to change pre-set limits and setting, additionally, the imbalanced motor produces a vibration alert when in alarm mode.

The model number refers to following table. All models have same schematic design. However, the external dimension of Clydesdale 4R sensor is bigger than Clydesdale whittle sensor, so the PCB layout is a little bit different between Clydesdale-whittle and Clydesdale-4R. The rest of model number have no effects on the circuit design of BWSa-bbc-d.

| | | | |
|-----|-----------------|-----------------|--|
| a: | Product version | empty 1 2 | Standard version Wireless version Low cost version |
| bb: | Gas type | b bb | Detect gas Detect extended gas |
| c: | Sensor type | L empty | Clydesdale Whittle sensor Clydesdale 4R sensor |
| d: | Color | Y B | Yellow Black |

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

| Issue | Date | Report number | Comment |
|-------|------------------|---------------|---------------------------------------|
| 0 | 06 November 2018 | R70178314A | The release of the prime certificate. |

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

None

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.

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service

Unit 6 Hawarden Industrial Park,
Hawarden, CH5 3US, United Kingdom

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: ukinfo@csagroup.org
Web: www.csagroupuk.org



SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

Sira 18ATEX2243
Issue 0

17 CONDITIONS OF MANUFACTURE

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.

This certificate and its schedules may only be reproduced in its entirety and without change.

Certificate Annexe



Certificate Number: Sira 18ATEX2243
 Equipment: Handheld Toxic Gas Monitor
 Applicant: RAE Systems, Inc. A Honeywell Company

Issue 0

| Drawing no. | Sheets | Rev. | Date (Sira Stamp) | Description |
|---------------------------|---------|------|-------------------|---|
| 904-E300-029.02 | 1 of 1 | 1 | 27 Sep 18 | BWSx-xxx-x hardware Equivalent Circuit |
| 904-E300-029.03 | 1 of 1 | 1 | 27 Sep 18 | BWSx-xxx-x (Clydesdale) Function Block Diagram |
| 904-E300-029.07 | 1 to 6 | 1V0 | 27 Sep 18 | Solo Sensor List |
| G05-0901-ASY | 1 to 4 | 1 | 25 Oct 18 | BWSx-xxx-x Clydesdale-Whittle assembly drawing. |
| G05-0902-ASY | 1 to 4 | 1 | 25 Oct 18 | BWSx-xxx-x Clydesdale-4R assembly drawing. |
| A01-1200-000 | 1 to 13 | 3 | 27 Sep 18 | RMBLEB PCB layout. |
| A01-1200-001-BOM | 1 to 2 | 4 | 27 Sep 18 | BLE M5 BOM |
| G05-1010-BOM | 1 to 4 | 4 | 27 Sep 18 | BWSx-xxx-x Clydesdale-4R sensor main board PCB BOM. |
| G05-1011-BOM | 1 to 4 | 4 | 27 Sep 18 | BWSx-xxx-x Clydesdale-Whittle sensor main board PCB BOM |
| G05-4003-LBL | 1 of 1 | 8 | 26 Oct 18 | BWSx-xxx-x Clydesdale Label drawing |
| A01-1210-SCH | 1 of 1 | 3 | 27 Sep 18 | RMBLEB-M5 Schematic. |
| 904-E300-029.06 | 1 of 1 | A | 27 Sep 18 | Board connection. |
| G05-1000-000 | 1 to 12 | A | 27 Sep 18 | With BWSx-xxx-x Clydesdale-4R sensor PCB Layout |
| G05-1001-000 | 1 to 12 | A | 27 Sep 18 | With BWSx-xxx-x Clydesdale-whittle sensor PCB Layout |
| G05-1011-000/G05-1010-000 | 1 to 6 | A | 27 Sep 18 | Main board schematic. |

This certificate and its schedules may only be reproduced in its entirety and without change.