



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 15ATEX2080X** Issue: **4**

4 Equipment: **PGM-26XX 4-gas portable gas monitor**

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

6 Address: 1349 Moffet Park Drive
Sunnyvale
CA 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 60079-1:2014 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:



I M1
Ex ia I Ma
Ta = -20°C to +60°C

or



II 2G
Ex ia d IIC T4 Gb
Ta = -20°C to +60°C

Project Number 70197417

C Ellaby
Deputy Certification Manager

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The PGM26XX is a portable, battery-powered, four-gas monitor that is housed in a plastic enclosure with additional stainless steel and rubber for protection. It is designed to be hand-held or attached to the person by means of a belt clip. The equipment includes two toxic sensors, one LEL sensor and one oxygen sensor, it also incorporates a liquid crystal display as well as an alarm with visual, audible and vibrating modes.

The equipment has an optional add-on modem that provides GPS (Mesh/WiFi/BLE) and also enables tracking of the device.

The PGM26XX has no electrical connections while in the hazardous area. It may be charged in the non-hazardous area only: Um = 6.0 Vdc, maximum charging current 1900 mA.

Variation 1 - This variation introduced the following changes:

- i. Introduction of a new LCD.
- ii. Change in status LEDs with the consequential addition of safety resistors and track layout changes.
- iii. Specification of an additional manufacturer of the MESH module.

Variation 2 - This variation introduced the following change:

- i. Introduction of revision to Wi-Fi (wireless module) board; Drawings M03-1012-SCH and M03-1002-000 were revised to show the new schematic and new track layout.

Variation 3 - This variation introduced the following changes:

- i. The change of company name and address from RAE Systems, Inc. 3775 North First Street, San Jose, CS 95134, USA, to RAE Systems, Inc., A Honeywell Company, 1349 Moffet Park Drive, Sunnyvale, CA 94089, USA.
- ii. The introduction of an additional manufacturing location, RAE Systems Inc, A Honeywell Company, 12220, Rojas Drive, El Paso, TX 79936, USA was recognised.
- iii. The Notified Body issuing the Quality Assessment Notification was changed from DNV (0575) to DNV GL Nemko Presafe AS (2460), the label marking being updated accordingly.

Variation 4 - This variation introduced the following change:

- i. Variation to include an alternative wireless board NB-IoT (wireless module); Represented by drawings M03-1112-SCH, M03-1102-000 and M03-1112-BOM to show the new schematic and new PCB track layout.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	23 September 2015	R70016395A	The release of the prime certificate.

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Issue	Date	Report number	Comment
1	31 May 2016	R70056483A	This Issue covers the following changes: <ul style="list-style-type: none">• EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i>• The introduction of Variation 1.
2	07 May 2018	R70175862A	The introduction of Variation 2.
3	03 December 2018	R70181537A	The introduction of Variation 3.
4	07 January 2019	R70197417A	The introduction of Variation 4.

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

15.1 The PGM-26XX shall only be charged using a charger specifically supplied for use with the unit (for example part number 3A-066WPxx or 3A-401WP12, manufactured by ENG Electric), approved as SELV or Class 2 equipment against IEC 60950 or an equivalent IEC standard. The maximum voltage from the charger shall not exceed 6.0 Vdc.

Likewise, any data download device connected to the PGM-26XX shall also be approved SELV or Class 2 equipment.

15.2 This equipment has not been assessed in accordance with the requirements in respect of safety-related devices that are defined in EHSR 1.0.5 of directive 2014/34/EU; in consequence, it shall not be used for an application where it is intended to contribute to or is required for the safe functioning of equipment or protective systems with respect to the risk of explosions.

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 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.

17.3 The PGM-26XX incorporates a flammable gas sensing head, certified under IECEx FTZU 14.0019U (Group II) and IECEx DEK 15 0031U (Group I). It is therefore the responsibility of the RAE Systems to continually monitor the status of the certifications associated with this device. RAE Systems shall inform Sira of any modifications to the device that may impinge upon the explosion safety design of the PGM-26XX.

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Certificate Annexe



Certificate Number: Sira 15ATEX2080X

Equipment: PGM-26XX 4-gas portable gas monitor

Applicant: RAE Systems, Inc., A Honeywell Company

Issue 0

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Description
130-0353-000	1 of 1	2	23 Sep 15	GPS module specification
150-0315-000	1 of 1	1	12 Aug 15	Mesh module specification
550-7036-000	1 of 1	1	12 Aug 15	GPS active antenna specification
904-E300-023.00	1 of 1	3	12 Aug 15	Sector diagram
904-E300-023.02	1 of 1	1	12 Aug 15	Block diagram
904-E300-023.10	1 of 1	2	12 Aug 15	Fuse encapsulation
A01-1017-000	1 of 1	1	12 Aug 15	Wi-Fi module specification
BSE-S	1 to 7	1.0	12 Aug 15	Li-ion battery pack specification, BYD data sheet
M03-0901-ASY	1 to 3	3	12 Aug 15	General assembly
M03-1000-000	1 to 13	B	12 Aug 15	Track layout, main board
M03-1001-000	1 to 15	B	12 Aug 15	Track layout, mesh board
M03-1002-000	1 to 15	B	12 Aug 15	Track layout, Wi-Fi board
M03-1010-BOM	1 to 5	5	12 Aug 15	Main board, critical component list
M03-1010-SCH	1 to 7	10	12 Aug 15	Schematic, main board
M03-1011-BOM	1 to 4	2	31 Jul 15	Mesh board, critical component list
M03-1011-SCH	1 to 2	5	12 Aug 15	Schematic, mesh board
M03-1012-BOM	1 to 4	2	31 Jul 15	Wi-Fi board, critical component list
M03-1012-SCH	1 to 2	4	12 Aug 15	Schematic, Wi-Fi board
M03-3004-ASY	1 of 1	4	12 Aug 15	Assembly, battery pack
M03-4003-LBL	1 of 1	5	12 Aug 15	Marking, main unit, IECEx/ATEX/CSA
M03-4004-LBL	1 of 1	1	12 Aug 15	Marking, battery pack
M03-LCDM-000	1 of 1	1	12 Aug 15	LCD specification
M03-SEN1-000	1 of 1	2	12 Aug 15	PGM26XX sensor list
P10883759LT-05B	1 to 13	5	12 Aug 15	Narada cell specification, schematic, artwork, BoM

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
A01-1015-001	1 of 1	2	08 Apr 16	Mesh module Specification
904-E300-023.51	1 of 1	5	27 May 16	PGM268X scheduled document list
M04-0901-ASY	1 of 3	2	08 Apr 16	PGM268X Unit Assy
M04-1000-000	1 of 13	B	08 Apr 16	PGM268X Main Board layout
M04-1010-BOM	1 of 5	3	08 Apr 16	PGM268X Main PCB BOM
M04-1010-SCH	1 of 7	3	08 Apr 16	PGM268X Main board schematic
M04-LCDM-000	1 of 1	2	08 Apr 16	LCD module, for PGM 26XX

Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
M03-1002-000	1 to 15	C	15 Apr 18	Track layout, Wi-Fi board
M03-1012-SCH	1 to 2	5	27 Mar 18	Schematic, Wi-Fi board

Issue 3

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
M03-4003-LBL	1 of 1	6	23 Oct 18	PGM-26XX, Product Label

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Certificate Annexe



Certificate Number: Sira 15ATEX2080X
Equipment: PGM-26XX 4-gas portable gas monitor
Applicant: RAE Systems, Inc., A Honeywell Company

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
M03-1102-000	1 to 15	A	30 Oct. 18	Track layout, Wi-Fi board
M03-1112-SCH	1 to 3	2	30 Oct. 18	Schematic, Wi-Fi board
M03-1112-BOM	1 to 2	5	30 Oct. 18	Wi-Fi board, critical component list

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Sira Certification Service

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