



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 11ATEX2152X** Issue: **0**

4 Equipment: **Portable combustible and toxic gas detectors
Model PGM62a0x, PGM62a6x and PGM62a8x**

5 Applicant: **Rae Systems Inc** **Rae Systems (Shanghai) Inc**

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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 60079-0:2006 EN 60079-11:2007 EN 60079-26:2007
EN 60079-0:2009 (used for guidance in respect of marking)

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 1G or II 2G
Ex ia IIC T4 Ga (with RAE LEL sensor Ex ia) or
Ex ia d IIC T4 Gb (with Dynament LEL sensor Ex d)
TA = -20°C ≤ Tamb ≤ +50°C

Project Number 24989

C Ellaby
Deputy Certification Manager

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The Model PGM62xxx is a handheld, battery powered, multiple Gas Detector for the continuous display of toxic or combustible gas concentrations. The Gas Detector is provided either with a pump to bring the air sample to the sensors or provided as a diffusion model (designated with the suffix D.) The Gas Detector is supplied by a rechargeable Battery Pack containing two, Li-ion battery cells connected in parallel. The Li-ion Battery Pack has two variations: one with four power outputs rated from 0.80W to 1.82 W and the other with power outputs rated from 1.16 W to 1.82 W. The Battery Pack is fully encapsulated and contains safety circuits including infallible resistors and five fuses. An alternative Battery Adapter uses four replaceable AA alkaline batteries, Duracell MN1500 type only. The alkaline Battery Adapter also has two variations: one with four outputs rated from 0.78 W to 1.12 W and the other rated from 1.11 to 1.12 W. The alkaline Battery Adapter also contains safety circuits including infallible resistors and fuses. The fuses are encapsulated. Three push buttons facilitate the access to measured levels or alarms, and the mode button makes it possible to change preset limits and setting. Audible and visual alarm indicators are included. The visual alarm comprises a red LED bar visible from the top and the side. Two imbalanced motors produce a vibration alert when in alarm mode.

There are three variations of the Gas Detector with the following variations:

Model	Battery pack wattage	LEL Sensor (zone)	NDIR Sensors
PGM-62a0x	1.2 W	RAE (zone 0)	No
PGM-62a6x	0.8 W	RAE (zone 0)	No
PGM-62a8x	0.8 W	Dynamant (zone 1)	Yes

The types of sensors are LEL (either catalytic bead or NDIR), electrochemical (EC), PID and Gamma. The Gas Detector has five sensor slots to accommodate sensors as follows;

Sensor Type	Slot 1	Slot 2	Slot 3	Slot 4	Slot 5
PID					X
LEL (catalytic bead)	X				
NDIR					X
EC	X	X	X	X	X
Dual EC	X		X		X
Gamma				X	

Note: NDIR includes CO₂, methane LEL and methane VOL sensors

The various variations of the PGM-62a0x, PGM-62a6x and PGM-62a8x reflect sensor combinations that are unique to specific end-use applications as shown in the following table.

Model no.	Marking	PID	Gamma	RAE LEL	Dynamant NDIR	EC
PGM-62a0x	II 1G, Ex ia IIC T4 Ga	Optional	Optional	Optional	No	Optional
PGM-62a6x	II 1G, Ex ia IIC T4 Ga	Optional	Optional	Optional	No	Optional
PGM-62a8x	II 2G, Ex ia d IIC T4 Gb	Optional	Optional	Optional	Optional	Optional

Notes: Where a = 0, 2, 4, 6, 8 or 9 to show type
The model no. may contain following suffixes:

- T to denote a unit without any combustible sensors.
- D to denote a diffusion unit with RAE LEL sensor (PGM-62a0, PGM-62a6 and PGM-62a8) or Dynamant LEL sensor (PGM-62a8)
- TD to denote a diffusion unit without any combustible sensors.

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Sira Certification Service

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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	24 June 2011	R24989A/00	The release of the prime certificate.

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

15.1 The PGM62xxx shall only be fitted with RAE Systems Battery Pack type M01-3051-000 or M01-3053-000 or Battery Adapter M01-3052-000 or M01-3054-000 fitted with Duracell MN1500 batteries.

15.2 The PGM62xxx shall only be charged outside the hazardous area.

15.3 No precautions against electrostatic discharge are necessary for portable equipment that has an enclosure made of plastic, metal or a combination of the two, except where a significant static generating mechanism has been identified. Activities such as placing the item in a pocket or on a belt, operating a keypad or cleaning with a damp cloth, do not present a significant electrostatic risk. However, where a static-generating mechanism is identified, such as repeated brushing against clothing, then suitable precautions shall be taken, e.g. the use of anti-static footwear.

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 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 products covered by this certificate incorporate previously certified devices, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform Sira of any modifications of the devices that may impinge upon the explosion safety design of their products.



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.